The Builder.

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MESSRS. J. B. Waring and T. R. Macquoid have just now issued a volume entitled, "Examples of Architectural Art in Italy and Spain, chiefly of the 13th and 16th Centuries,"* which eminently deserves the support of the profession. It is a large volume, "Columbier folio;" consists of 64 plates, in lithography, partly elevations and details in outline very clearly drawn, and partly picturesque views of structures; and is dedicated to the President, Council, and Fellows of the Institute of British Architects. It is not merely a pretty work, and a pleasant work to turn over, but a practically useful work, presenting a mass of data, models to work upon, and materials for re-combination. It is to be regretted that the volume contains no letter-press. The only descriptive matter given is on a loose sheet of four pages, called a prospectus; an arrangement, we venture to guess, made to escape the unjust tax imposed on authors by the requirement of a certain number of copies for public collections,—a tax which, of course, presses peculiarly hard on the producers of costly illustrated works; every copy of which entails a large expenditure on the author. It is most desirable that there should be public collections, where every work issued should be found; but it is manifestly unjust that the cost of supplying these should fall wholly on the producers, who ought to be aided instead of oppressed. It is quite time that this unjust and injurious law should be abrogated.

The plates in Messrs. Waring and Macquoid's work follow under the heads Romanesque, Florentine, Cinque-Cento, Italian, and Spanish Renaissance. They say, in their prospectus, that "they cannot help looking on the Cinque-Cento, Renaissance, Elizabethan, Norman, and Romanesque" (there is a little confusion here), "as various stages of development of one style, suited to peculiar subjects, influenced by the requirements of the times when they arose, and containing a generic similitude." With respect to the possible invention of a new style they say, "if such a reward does attend the activity and creative powers of the century, it seems pretty certain that the semicircular arch will be its constructive and characteristic feature; and a more noble foundation art never rested on: perfect in its form, calm, powerful, continuous, it is certainly suited to give grandeur to any system which may be raised on it. However this may be, considering the constant use of the arch at the present day, its ornamentation has been strangely neglected, and we have therefore sought for the best examples of its ornamental construction in Romanesque and Cinque-Cento, where it forms an important feature."

Many of these examples from Pisa, Lucca, &c. are very interesting and suggestive. The cloisters at Moureale contain some good sculpture, and afford them subjects. The porch of Lucca Cathedral shows the importance of providing for light and shade in designs. Without arrangements to obtain these, the finest work is thrown away,—with them, the roughest work may be overlooked. The Town Hall of Piacenza deserves notice on account of its curious terra-cotta windows. The view given is not so good a drawing as some of them; and we may observe generally that the picturesque views, although very effective, are somewhat coarsely executed.

Amongst the examples of Florentine palaces are measured elevations of the Palazzo Ricardi and Palazzo Strozzi. Iron and bronze works from the same neighbourhood are not forgotten. The mouldings of the Florentine buildings are peculiar and deserve study.

Amongst the Cinque-Cento buildings is the Palazzo Manzoni, Venice, with much elegance and many defects. There are views of the Giant's Staircase at the Ducal Palace, Venice, (good), and the Palazzo Vendramin. Of Venetian details there is a good collection.

The marble lavatory in the Certosa, at Pavia (*circa* 1490) is for the most part nicely drawn. It is of plain white marble, with serpentine inlay, and is a miracle of delicate workmanship. The relief here, as well as other of the monuments shown, is very low, and requires a stronger light than we usually have in England. The cloisters of the Certosa furnish some elaborately sculptured architraves.

For drawing part of St. Mark's Library, Venice (type of the Carlton Club), they had the advantage of a scaffolding: the cornice is given to a large scale.

We pass on to what will be considered by many the most novel and interesting part of the work—the illustrations of Spanish Renaissance,—the Town Hall, Seville; the Hospital de la Cruz, Toledo (1514); Casa Miranda, Burgos; Collegio de las Virgenes, Zaragoza; the Town Hall of Zaragoza; the Caza Zaporta, of same city, and others.

We should mention that "of the Spanish Renaissance, or Platarесco, as it is termed, exuberance of ornament, and variety of design, are the chief characteristics. It possesses more merit in its sculpture than in its architecture, and holds a place between the Renaissance of France and the Elizabethan of England. The arabesques are remarkable for their invention and grotesqueness, the preponderating use of figures, human and inhuman, birds, dragons, beasts, and nondescripts, all excellently worked out. Fancy supersedes beauty, and often with effect; distorted pediments, an immense quantity of sculpture, bed-post columns, and a great admixture of Gothic models, are its usual and worst features, forming a whole which, however it may please the eye and the imagination, is straggling, rough, unrefined, and offensive to an educated sense of beauty: it lacks the grace and compactness of Italian *cinque cento;* and contesting with Gothic and Moorish in its richness and effects, falls far short of both in artistic merit. It is, however, not the less valuable on this account for its suggestive qualities, and well adapted for interiors, where the fancy is allowed a wider scope in the use of ornament." Of the buildings which preceded this style in Spain there are still many fine remains. Moorish architecture will be found in Seville, Granada, and Cordova, and Gothic buildings will be found throughout the country. We think that our authors, in the above remarks, are scarcely just to the Renaissance of Spain. "This style," says Mr. Ford, in his admirable "Handbook for Travellers in Spain,"* "was exalted to its highest grade by a glorious host of Spanish artists, who rivalled in marble and metal the Bramantes and Cellinis of Italy; from its delicate details, wrought like a finely chiselled piece of plate, this style is called in Spain *el Plateresco*, and also *de Berruguete*, from the name of the great architect, sculptor, and painter, who carried it out to its full perfection, and whose exquisite works are deserving of the closest study."

Under Philip II. the Plateresque architecture declined, and the more strictly classical was introduced, generally known in Spain as that of *Herrera*, from being adopted by Juan de Herrera, who completed the Escorial in 1584, a building "extremely magnifical, of fame and glory throughout all countries."

It will be useful to know some of the leading terms as regards the cathedrals of Spain; and we glean the following from Mr. Ford's book, already mentioned:—The exteriors are often surrounded with a platform or *lonja*, which, if ascended by steps, is called a *gradus*, "grees:" the principal front is frequently left unfinished,—first, in order to disarm the evil eye; and next, to serve as a constant pretext for begging contributions for its completion. The western entrance commonly presents the chief façade, and is called *fachada principal;* the naves, *naves*, are supported by piers, *pilones*, from whence springs the roof, *boveda*. The side aisles, *alas*, wings, are called *laterales*, *colaterales;* at the entrance is a small *pila*, stoup, or bénitier, which contains the *agua bendita*, or holy water, with which every Spaniard crosses him or herself on entrance, *santiguanse*. The quire, *coro*, is ordinarily placed in the centre nave, thus blocking it up and concealing the high altar; its back, which fronts the spectator who enters from the west, is called *el trascoro;* the lateral sides, *los respaldos del coro*, and over these the organs are usually placed. The quire is lined with stalls, *sillas;* the seats, *silleria del coro*, are generally carved, and often most beautifully, as are the desks of the quirister's books, *los atriles*, and the lecterns or *facistoles*.

Opposite to the *coro* is an open space, which marks the centre of the transept, *crucero*, and over which is the great dome, *el cimborio*. This space is called the "*entre los dos coros*," and divides the quire from the high altar. This, again, is usually isolated and fenced off by a *reja*, "purclose," or railing, the *cancelli*, gratings, whence comes our term chancel. These *rejas* are among the most remarkable and artistical peculiarities of Spain, and, from being made of iron, have escaped the melting-pot. The pulpits, *pulpitos*, *ambones*, generally two in number, are placed in the angle outside the chancel: they are fixed N.W. and S.W., in order that the preacher may face the congregation, who look towards the high altar, without his turning his back to it. Ascending usually by steps is the *capilla mayor*, *el presbiterio*, where is the high altar, *el altar mayor*, on which is placed a tabernacle, *el tabernaculo*, or *ciborio*, under which the consecrated wafer is placed in a *viril*, or open "monstrance," when displayed, or *manifestado*.

At the back of the high altar rises a screen, or *reredos*, called *el retablo;* these often are most magnificent, reared high aloft, and crowned with a "holy rood," *la Santa Cruz*, which is the representation of Christ on the Cross, with St. John and the Virgin at his side. The *retablos* are most elaborately designed, carved, painted, and gilt *estofado*. They are divided into compartments, either by niches

* Published by Thomas M'Lean, London, 1850.

* London, John Murray, Albemarle-street.

or intercolumniations; and these spaces are filled with paintings or sculpture, generally representing the life of the Virgin, or of the Saviour, or subjects taken from the Bible, and not unfrequently from the local legends and tutelars: these are the books of those who can see, but cannot read. Spaniards, in designating the right and left of the altar, generally use the terms *lado del Evangelio, lado de la Epistola*: the *Gospel* side, that is the right, looking from the altar; the *Epistle* side, that is the left.

Architecture, after the erection of the Escorial, declined in Spain under the baneful influences of caprice and imitative adornment. Old buildings were disfigured or pulled down to make room for new abominations; and what Charles V. said to a prelate at Cordova in 1523, would have equally applied elsewhere: "You have built here," exclaimed he, "what you, or any one, might have built anywhere else; but you have destroyed what was unique in the world. You have pulled down what was complete, and you have begun what you cannot finish."

ON LINEAL EXPRESSION AND ARCHITECTURAL DESIGN.*

IT is presumed that the best points of each character, the grand and the picturesque, may be joined to their mutual advantage, and form a more agreeable novelty. Though bearing less undivided application to our purpose, let us commence with the art of painting, and turn to a great authority, Sir J. Reynolds, who, with one or two strange contradictions to his own words, speaks thus:—

"Such as suppose that the great style might happily be blended with the ornamental; that the simple, grave, and majestic dignity of Raffaelle could unite with the glow and bustle of a Paolo or a Tintoret, are entirely mistaken. The principles by which each are attained are so contrary to each other, that they seem, in my opinion, incompatible, and as impossible to exist together as that in the mind the most sublime ideas and the lowest sensuality should at the same time be united."

Instead of "impossible" it would be better to say "disagreeable," for such monstrosities have existed. Of Rubens he says:—

"The whole is so much of a piece, that one can scarce be brought to believe, that if any of the qualities he possessed had been more correct and perfect, his works would have been so complete as they now appear."

Again, of Poussin, in comparison with Rubens:—

"However opposite their characters, in one thing they agreed, both of them always preserving a perfect correspondence between all the parts of their respective manners, insomuch that it may be doubted, whether any alteration of what is considered as defective in either would not destroy the whole effect."

But, without speaking of what might or might not be, let us turn to cases where this amalgamation has been tried.

Tintoretto professed to join the colouring of Titian and the drawing of M. Angelo: here, one would say, if such an amalgamation to the benefit of each were possible, it would succeed, for the character of the colouring was separated by no very startling grade from the character of the drawing and the man himself who proposed to obtain this end—a true genius. Now, what is the result? Why, that he is honoured, and we delighted, not by his success in joining imitations of both, as he often does most ably, but in so far as his own strong and individual character is marked upon the canvass.

Carlo Maratti, according to Reynolds, "knew and practised all the rules of art, and from a composition of Raffaelle, Caracci, and Guido, made up a style, of which the only fault was, that it had no manifest defects and no striking beauties, and that the principles of his composition are never blended together, so as to form one uniform body, original in its kind, or excellent in any view."

Here we have a man of genius, and a man of comparatively, if not merely, mechanical power, trying this system of the amalgamation of excellences for the production of an equal or superior excellence.

In each case the result is a failure. Further, if the principle were correct, we might justly say, that Rembrandt being the most perfect master of light and shade, let us give him Raffaelle's perfection of form, and they would mutually enhance each other's charm; but a moment's thought of cases where this has been attempted, assures us that they do, on the contrary, mutually deteriorate each other. Make up a landscape from the calm beauty of Claude, the massive grandeur of Poussin, and the dotty picturesqueness of some of our modern schools, and mutual detriment would assuredly result. Fuseli, in his endeavour to unite grace and grandeur in his women, produces on me at least a most disagreeable impression. Michelangelo never attempted this: it is scarcely too much to say, that his celebrated female figures in "Night" and "Morning" are devoid of all grace or beauty, except that which the necessary form of humanity involves.

As for ornament, he who should wish the minute finishing, or the quantity of ornamental subjects, in most Dutch pieces, or the early Italian school—in the works of a Fra Bartolomeo, a Volterra, or a Reynolds—must be destitute of all perception of fitness.

We cannot bring these three distinct characters together for the production of an equal, or superior character,—they *must* detract from each other. This is, perhaps, not so evident in painting, because there are so many other adjuncts to attract the attention; but even from these instances I think we are justified in arriving at the conclusion that form, light and shade, and ornament, have each individually the qualities of grandeur, beauty, and picturesqueness, and that when the form is picturesque, the shadow and ornament should be likewise picturesque, and that the same system should be carried out through whatever character, simple or compound, is meant to be expressed; and that to make the form well defined and graceful, the shadow undefined and picturesque, and the ornament massive and grotesque, would be to produce an eccentric, but surely not a good effect.

Now, let us turn to sculpture, and here we must, in mere fairness, make another extract from Reynolds:—"The highest perfection of the human form is not to be found," he says, "in the Hercules, nor the gladiator, nor in the Apollo, but in that form which is taken from all, and which partakes equally of the activity of the gladiator, of the delicacy of the Apollo, and of the muscular strength of the Hercules. For perfect beauty in any species must combine all the characters which are beautiful in that species,—it cannot consist in any one to the exclusion of the rest. No one, therefore, must be predominant, that no one may be deficient."

This idea of a central form, from which all "deviation is deformity," consisting in the combination of distinct qualities or characters, and exhibiting each in perfection, is one of those loose and obstructive fancies, grounded on no reasonable principles nor on any analogous facts, which serve only to puzzle and confuse us. Let us look around, and first let us take the forms of trees. An artist may make an ideal pine tree from many well-selected models, more perfect in its special character than any we have seen; he may do the same with the poplar, the oak, the willow, the yew, but would any one allow or conceive that there is a central form of a tree, more perfect than any existing, gained by blending the respective excellence of each?

If we take animated nature, it may be allowed that an artist might make a lion more noble than any that ever existed—a horse more beautiful—a gazelle more graceful—a goat more picturesque—but could any art make out of these a central perfect and supreme form, expressing their perfect variety in one perfect unity? Would one not produce rather the horrible jumble of a disturbed dream?

It may be urged that I am enlarging the sphere of operation, and altering the meaning of the proposition; but let us take the words as they stand: "Perfect beauty in a species must combine all the characters of that species; it cannot consist of any one to the exclusion of the rest. No one, therefore, must be predominant, that no one may be deficient." The sphere of my illustration has certainly been enlarged, but the sense and spirit of the reasoning remain the same, viz., that opposite or various qualities must be joined for the formation of actual perfection; for the Hercules, the gladiator, and the Apollo are as much distinct species of one form, man, though it may require a more delicate sense to perceive it, as the European, the Asiatic, and the Negro of the same form; the oak, the elm, the aspen, of the tree; or the mule, the zebra, and the ass, are of the horse. Their characters are essentially distinct, and yet resolvable into one pervading form. And if it be true, that no perfect beauty can exist which does not include all the characters which are beautiful in a species, then even binding ourselves down to this word beautiful, which is most indefinitely used, is wrong, for surely the Hercules would not be characterised as beautiful,—we must join the Asiatic to the European, the zebra to the horse, and the aspen to the elm, to the improvement of each.

Now, without further simile, it seems clear to me, from the former investigations, that qualities strongly marked and perfect or excellent in themselves when amalgamated, do not aid or improve, but do actually neutralize and even destroy the charm of each. Let us take it in a common-sense view, and is it not a paradox to assert that perfect beauty is not in the Hercules, the gladiator, or the Apollo alone, but in that form which partakes of the muscular strength, of the activity, of the delicacy of each? That which renders them separately so good is the perfect development of each quality singly; and is it not clear that by blending them in the only way Reynolds can mean throughout the whole man, they at once lose those characteristics perfectly developed in their respective forms, and become imperfectly developed in a compound form? All compound qualities are more or less inconsistent, and all single qualities, though made up of an infinite variety of forms, are consistent. The expression of character, and not the expression of beauty only, is what delights us in form as in every thing else; and in so much as any expression is perfect, in so much any admixture of another expression detracts from its supreme merit and the pleasure it affords us. Moreover, this principle of fusion, which Sir Joshua considers would be the perfection of ideal humanity, has been carried out in varied degrees, more gradually and artistically by the Greeks, and more coarsely by the Romans, who, in one case, that of combining manly beauty and delicacy or grace, have produced those effeminately graceful statues which are to be met with so constantly in the Italian galleries, and are more disagreeable than the representations of a consistent deformity. These assertions of Reynolds are diametrically opposed: the styles he speaks of in painting are merely species or characters of that mode of expression; and it seems to me that the two former are founded on fact and observation on truth, whilst this latter is founded on no fact, truth, or reason. The concluding remark especially confutes itself, for where no character is predominant, even though none may be deficient, no character exists: this is inconceivable, and produces on the mind the idea of non-entity. Surely it was not from precedent or example that this is predicated as the perfection of form, for there is no one celebrated work of sculpture or of any other art but what has some predominant character by which we distinguish it. And it is just the predominant character of each statue he has named which distinguishes it as excellent over all its rivals.

Architecture, I think, shows the stubbornness and incongruity of strongly marked qualities more clearly than the other arts, there being less to confuse the ideas with than in sculpture or painting, and it exhibits better the gradual, almost imperceptible, differences by which alone they are made to harmonise, and their antagonism is rendered less palpable. It must be premised that as art, like civilisation, admits of no chronologically continuous development, but shows various phases in various and unconnected periods; in filling up and explaining the necessary gradations of a particular class or style of building, we must be prepared to put chronological order out of our minds, as one, for instance, would be forced to

* See page 338, *ante*.

commence the history of architecture with the comparatively modern remains of Druidical times.

Let us commence, then, with retaining what is beautiful of the Italian, what is grand of the Egyptian, what is picturesque of the Renaissance, and how does the idea of the skilfullest fusion of them affect the mind? Even unite the graceful picturesqueness of Moorish leaf-ornament, and the rough picturesqueness of a Gothic monument, and could any imagination conceive an agreeable combination? In either of these cases would a superior or equal style be educed? or rather, would there not be a hybrid conglomeration, destroying the charm of each? Sicilian and Spanish Saracenic have both been skilfully blended with Norman and Gothic respectively. Yet the architecture thus produced, however its novel effect may charm us, ranks in each case lower than its primary and pure constituents, and is universally allowed to be *theatrical*, in a lowering sense of the word. It is here the same as before; the different qualities of each are deteriorated in combination.

Let us now take an Elizabethan building: here we have much that is allowedly coarse and grotesque: here, might the breeder of styles say, "is a fine opportunity for a cross with the graceful or the beautiful." Let him then put up a Canova in the niche, or replace that grotesque column with its Grecian type, and is he not on the right track to ruin the whole building? It is not prejudice which would affright the admirer of this style, were you to bring the orders of ancient Greece for his use. The building has one distinct quality or character, and his sense of propriety or taste at once tells him that these, though good in themselves, are not good for *his* purpose, but if carried out through the whole building, even retaining the outline, would ruin its charm. We may assert the same as regards two phases of character in the same style. There is a corresponding phase of Italian architecture in Venice, as seen in many parts of the Doge's Palace. I mention Venice more especially, because the Cinque Cento of that city bears more striking features of resemblance to our Elizabethan than the Cinque Cento of Italy generally, having amongst them those many-curved gables so common with us. Now, were you to apply any ordinary string course, niche, moulding, or foliated ornament of the one to the other, they would be mutually out of place; for the character of strong or grotesque picturesqueness in the one, will not amalgamate satisfactorily with the grace, the delicacy, often the weakness of the other.

There is no more difference as regards the expression of form between Grecian, Roman, and Italian architecture, or between Doric, Ionic, and Corinthian, than there is between the expression of form in the Hercules, the gladiator, and the Apollo. Yet who would expect to form a more perfect fourth from the most skilful and artistic combination of the three, blend them as you will; and the many attempts of this nature by various celebrated modern architects, however satisfactory in themselves, all point out the futility of hoping to excel or equal the excellence of each, as they are known to us in their separate characters. It would seem, then, essentially wrong to graft the excellences of one style to the excellences of another in form or ornament; and yet we have many buildings whose size alone would render them grand, and arranged in the grand simplicity of Grecian art, detailed out with the spirit of ancient Rome, of Palladio, and Vignola; nay, often with the weak delicacy of Cinque Cento, and the richness of Gothic. It is but too usual to see the celebrated works of the past the model for our modern buildings; and while the essential original forms are retained, the whole character is deteriorated, if not destroyed, by that studied refinement and variation of detail which our books, our travels, our studies render so easy of obtaining, and which are so ruinous in their effect.

We cannot, I think, be too strongly impressed with the truth, for such to me at least it seems, that works of art are excellent, and delight us in so far as they express a certain quality, and that this delight becomes more strongly impressed as the *singleness* of any quality becomes more strongly impressed, whether it be grandeur, beauty, grace, picturesqueness, grotesqueness, oddness, ornament, fancy, or strength. And it is the perfection of any quality, worked out harmoniously from a variety of forms, all expressive of that quality (the greater the variety or irregularity, the more perfect being the quality), which gives an indestructible value to the works of all times and all nations—to the Egyptian temple, to the Italian palace, to the Gothic spire, to the ornamental work of the Middle Ages, to the Cyclopean as to the Moorish wall; and this is the chief reason which places Michelangelo and Raffaelle, the sculptors of the Apollo and the Venus, the architects of Greece and mediæval Europe, so high in our estimation.

But that compound qualities do and must exist, and that it is by the gradual introduction of these that we fill up the otherwise too startling gaps between strongly antagonistic qualities, and that there can be no stop in any system of created and creatable art, which has all these qualities to be expressed; but that there is or will be one continuous, imperceptibly linked series, infinitely varied, joining agreeably the now antagonistic features of each, does seem to me as certain as the world's motion, as clear as light. And it is for this reason as absurd to anathematise one style to the exaltation of another, to pit Gothic against Grecian, or Roman against Norman, as it would be to declare, that because the yew is picturesque, the elm is worthless; or because the chesnut tree is beautiful, the oak has no charms: each one has its uses.

Moreover, does it appear that works of art, though imperfect in many parts, are yet agreeable, as they hold a consistent character throughout all their parts, and with the pervading quality; whilst a work of art, with all its parts perfect in themselves, but not consistent in character one with another, nor with the pervading quality, is unsatisfactory, inferior, and fundamentally wrong in principle and practice?

The perfections, then, of opposite characters cannot be suddenly blended, for a greater or less degree of deformity would be the result: the progress must be gradual to be agreeable. No art could blend the Farnese Hercules and the Medicean Venus directly; yet indirectly, and by gradual stages, their antagonism is adjusted, and these three qualities of grandeur, beauty, and picturesqueness, in their perfection and transition, may be seen,—in the Olympian Jove, the grand; the Laocoon, the sublimely grand; the Hercules, grandly strong; the Apollo Belvidere, the beautiful, inclining in the Disk Thrower to the beautifully strong, and in the Venus to the graceful. Let Salvator Rosa represent picturesqueness, who in his own productions is at times fanciful, at times sublime; but as many might disagree with me as to the justice of these definitions, I would refer to the whole series of Grecian sculpture, which will show, on investigation, the most wonderful and delicate changes between these different characters, and rather still to living men, and then to animals, where the chain of graduated form is wonderfully shown, as seen at the British Museum.

This antagonism in Architecture, which is the cause of so much foolish party spirit, may be seen reconciled to a degree in Italian and Grecian, early and debased Gothic; but the more startling differences as between Gothic and Grecian, Elizabethan and Byzantine, are yet unreconciled, and it is to this end that modern art tends.

Venice, I think, more than any other city I ever saw, informs us on this matter, and has sufficient transition examples in all styles to prevent their strong difference from being disagreeable: I say disagreeable, for here, as in reasoning, the mind is pleased with *consequent* effects, and avoids sudden and unconnected leaps.

J. B. W.

BRISTOL ARCHITECTURAL SOCIETY.—The annual meeting of this society took place on Thursday evening last, the Rev. H. T. Ellacombe in the chair. The Hon. Secretary, the Rev. E. J. Carter, read the report, noticing the transactions of the society during the past year. The report lamented that the funds of the society had fallen off, but the good work of creating a suitable taste for sacred structures was still going on. A drawing of a proposed new window of stained glass, for Salisbury Cathedral, was exhibited by Mr. Bell.

ROMAN REMAINS AT CIRENCESTER.

No one requires to be told that the site of Corinium-Ceaster is a great archæological quarry, whence something curious or interesting and illustrative of the ancient occupation of Britain by the Romans is ever and anon turning up. Scarcely a single excavation indeed takes place within the limits of modern Cirencester without disinterring some well-preserved relic. Until now, however, the records of these remains, like the relics themselves, have been very much scattered, but a compendium of the more prominent and interesting discoveries at various times made in that vicinity has just been published,* and from the handsomely got up volume containing the illustrations and details of these, we propose to glean a few particulars of interest to our readers, although, unfortunately, as remarked by the authors of the volume, in a brief chapter on the architecture of Corinium—

"It is to be regretted that no systematic plan of investigation about the places where stone-work has been found has yet been undertaken; so that, although we have fragments of grand work of this description, consisting of portions of capitals of massive columns, friezes, and other architectural details, they are, in general, too incomplete for perfect drawings or descriptions."

On the construction of the walls of Corinium, its fortifications, and its probable importance, we have the following, amongst other remarks, in the outset:—

"In Leland's time, although much of the wall had been destroyed, still, as he tells us that 'a man may yet, walking on the bank of Churne, evidently perceyve the cumpace of foundation of towers sumtyme standing in the waul,' we are led to conclude that the fortifications of the Roman town must have been on a grand scale.

Much, however, as the wall had then suffered, it has fared still worse in more recent times, as by far the greater part has been removed to form parts of walls of a more modern date; but enough still remains to enable us to make out that Corinium Castrum was fenced by a thick wall, having faced stones without, whilst its inner courses were built of rough irregular stones, firmly cemented together, and imbedded in a mass of concrete.† This structure was probably about fifteen feet high, and from six to eight feet thick, and against it, on the inner side, was thrown up a sloping bank of mixed earth and stones, taken from the enclosed ground: hence the level surface which much of this now presents, as may be observed in the south-east corner of the Camp, enabling the land at that part to be used for very excellent water-meadows.

The wall so constructed was surrounded by a fosse, marked on the eastern side by the present course of the Churn; this stream having been diverted from its ancient and natural channel, which tradition asserts and our observations have confirmed, ran nearly through the centre of the present borough." * * *

"We conclude that the city of Corinium was peculiarly adapted for the centre of a peaceable colony, being itself well defended with strong fortifications—for all old writers lead us to infer that the wall was strengthened by occasional towers—accessible by so many approaches from the distant parts of the island, and also well defended by a chain of fortresses on its only exposed side. Corinium, under these circumstances, would become a capital city, having all the characteristics of a metropolis—warlike preparations, temples, and places of amusement, besides which, the domestic arrangements, utensils, and works of art, may be expected to point it out as a place of luxurious retirement. How far these suppositions are justified, will be determined by the descriptions of the various remains now extant."

Beyond the walls, apparently, the city had an amphitheatre,—

"Which now goes by the name of the 'Bull-ring:' its outline is exceedingly well preserved, although but few vestiges remain of the seats or steps (*gradini*) by which the spectators were usually accommodated. These were doubtless much plainer in Rudder's time, as he remarks, 'I am of opinion that there were originally rows of seats, or steps, one below the other, from top to bottom; but time has much defaced them.' The mounds, for such they are now, with their covering of turf, are twenty feet high, and enclose a space of a broadly oval form, measuring 148 feet from east to west, and 134 feet from north to south: the entrances, which are on a level with the floor of the interior, are 28 feet wide.

* Illustrations of the Remains of Roman Art in Cirencester, the site of Ancient Corinium. By Professor Buckman, F.L.S., F.G.S., &c., and C. H. Newmarch, Esq. London, 1850. Bell, Fleet-street.

† "Concrete, as constantly found at Cirencester, is made up of lime, sand, and gravel, in nearly equal parts." (?)

"The district of the Querns, with the Amphitheatre, is in the Chesterton tything; 'the name of which has a kind of evidence of its antiquity, for the Saxon Ceastre (and so our Chester), comes plainly from the Roman Castrum,' and the Romans must have had large quarryings as well as earth works in this direction."

In the (too slight) chapter on architecture some fragments of capitals and bases of columns are described, the latter used for merely upholding along with numerous pilæ of hollow bricks, the terras or floor of a room in a Roman villa.

"Three of these were Roman Ionic or Attic bases, with the lower torus the same diameter as the upper: these are without plinths, and are well turned, the shaft being plain.

The fourth cannot properly be referred to any of the purely classic orders of architecture; it is however of undoubted Roman work, and may be looked upon as a *composite* style: there is great elegance in its details, though the frequent repetition of the ogee moulding is not in the purest taste. The shaft of this also was plain.

The situation of these, supporting the terras of a room, shows either that they must have been portions of rejected or injured work, or else the remains of some earlier building, and, from the appearance of them, we incline to the latter opinion; but, whichever be the received notion, they equally prove that architecture must have reached a high degree of perfection in Corinium, or we should not meet with portions of classic buildings taking the places of common bricks, for no other apparent reason than that the latter ran short, and these bases, of which we might conceive more were at hand, were used as the readiest method of completing the requisite number of pilæ.

These bases are further interesting, as evidencing that during a long period architecture, in the advanced style of Rome herself, was practised in England by the Roman colonists; and they further show that within the walls of Corinium, the arts of peace, of which architecture is not the least in importance, were characteristic of that city. * * *

Stonework of the usual kind, employed in domestic architecture, is found in all the villas of Corinium, but as these edifices were generally plain externally, and as, moreover, all that now remains of them is little more than portions of these walls, a few feet below the present level of the soil, we can scarcely expect to trace more than foundations of stonework: these appear to have been put in in a substantial manner: the superincumbent masonry is of ashlared stone externally, the internal wall being composed of ruder stones, concreted together and made smooth inside by finer concrete and mortar, the whole together being from two to three feet in thickness. The jambs of doors are generally made of upright slabs of stone, devoid of moulding or architectural detail, and indeed the Roman dwellings of *Corinium* afford no exception to the general *external* plainness and simplicity of the domestic architecture of this people. The roofs of houses appear to have been made of the fissile stone of the district. Bricks entered largely into the architectural details of the houses, and these, which will be hereafter described, were of various shapes, according to the uses for which they were designed. The arch of the Præfurnium was composed of thick clay tiles, like those used in flooring modern cottage kitchens, and these were uniformly hard and well made. The different materials of which the dwellings were built, as stones, tiles, bricks, and concrete, are generally found intermixed and covering up the floors in the greatest possible confusion."

Illustrations in colours, prepared with the aid of Talbotype, are given of the very interesting tessellated pavement discovered last year at Cirencester, and there are also coloured plates of the previously discovered pavements. In describing these and particularly the former, some local observations on the method of constructing tessellated floors are given, with incidental remarks on hollow and other bricks, and on hypocausts and heating rooms. From these we glean the following particulars:—

"Roman floors appear to have been of two classes.

First, floors elevated above the level of the ground, generally upon a number of small supports or pillars, called *Pilæ*, in which case they receive the name of *Suspensuræ*, and were mostly finished with various designs in *Tessellæ*.

Secondly, floors formed on the ground, and without supports, also sometimes tessellated, but not always, as these belonged to second class rooms, and were generally in that portion of the house not used for the immediate accommodation of the proprietor.

I. The suspensuræ were generally the floors of the highest class, and of the most ornate description; they consequently indicate the best portion of the house, and are not, as was at one time universally believed, to be referred exclusively to baths, but were most frequently arrangements for heating the different apartments of the abode of the Roman.

On the removal of the first floor of last year's discoveries, in Dyer-street, the method adopted for the support of the terrass and pavement was admirably shown. In this instance the ground appeared to have been prepared with rubbish, made hard perhaps by beating, and upon this were placed the pilæ or small pillars, in eight rows, with eight in each row, at nearly equal distances from each other over the surface of this prepared floor.

The pilæ were made of various materials, most of them of bricks, eight inches square, surmounted by a larger brick, twelve inches square, forming a cap. Some of the pilæ were constructed of rough hewn blocks of stone, others of part stone, and the rest of bricks, to the required height. Upon each of the little columns so formed rested flanged tiles, with the flange placed downwards, thus forming a continuous floor of tiles, upon which the concrete, composed of a mixture of pounded bricks and lime, was evenly laid, about six inches thick, and this done the whole preparations were complete for the designs of the artist in mosaics.

The flanged tiles, as used for this room, were somewhat curiously placed, the flange being laid downwards, on a larger tile, which formed the cap of the pilæ, whilst all round the room was a projection in the wall, upon which the outer flanges rested. A reference to the Journal of the Archæological Institute, vol v., p. 28, will show a section of some pilæ discovered in Thames-street, in which the flanges are placed upwards: this was a good plan to hold the concrete more securely, but the method employed in the Cirencester example would tend to keep the whole super-structure drier, which was doubtless a reason for the adoption of this arrangement.

The room A presents different arrangements, for warming and ventilation, from the previous one: on removing its terrass and tessellæ, it appeared that half the floor rested on pilæ, the other portion on a previously prepared solid foundation, ranged within a wall of the height of the pilæ. The hypocaust of the former half offered some deviation from that of the room just described; in this the outer rows of pilæ were composed of hollow flue tiles, placed on end, in some of which was put a mass of mortar, apparently to keep them steady, by increasing their weight: these measured 16½ inches high, 6½ inches wide, and 5 inches deep, and had sometimes one, but more frequently two square holes cut on either of their thinner sides, and were ornamented on their flat sides with various lines, some waved and some straight, scarcely two being alike: these, from their variety and the sharp commencement of many of them, appear to have been made in the more complicated examples, with an instrument for that purpose, perhaps of a comb-like form, whilst many of the simply waved lines were made with the fingers, but all of them as the will and fancy of the workman dictated. Under this floor were also two or three larger hollow bricks, of 18 inches long and 8½ inches wide, and 6½ inches deep.

Other pilæ were formed of the 8-inch square bricks, some of rough hewn square stones, and the exceptions, mentioned at page 22, by bases of old columns: upon each of the kinds of pilæ, which were raised to the height of 20 inches, rested a larger tile, as a sort of cap, 1 foot square, and these each supported another tile 2 feet square, all of which, meeting at the edges, formed a continuous and evenly laid floor of strong tiles, firmly upheld by the pilæ, on which to lay the terrass.

From these arrangements it will be seen that the great object to attain was that of a free passage of air underneath the pavement, as floors of stone, in a cold and humid climate like that of England, would require some arrangement of the kind, not only to keep them from damp, but also for the purpose of warmth; and in order to effect this, a large arch, built of the flat bricks, opened into the hypocaust, through the north-west wall, which connected it with the *Præfurnium*, and the heated air also could be admitted into the room by two flues, which were built in the wall.

That this arrangement was solely for heating the apartment, and not, as was at one time generally believed, for the purpose of the bath, is further confirmed by only one-half of this floor being a suspensura, a circumstance which appears to be well explained by Mr. Tucker, who considers that 'the two parts of the room were intended for use at different seasons of the year, and that it was the *Triclinium* of the house, that portion over the hypocaust being the Triclinium hybernum, and the other end the Triclinium æstivum, for use in warm weather.'

The quantity of bricks, tiles, and other architectural fictilia removed from the site, offer some interesting examples of the great use made of these in Roman buildings, and their different forms and sizes, each with their peculiar adaptations, seem to afford a valuable lesson to the moderns upon the inexpediency of fettering the manufacture of such useful adjuncts in architecture by fiscal restrictions.

These bricks appear to have been made with great care, and are even now as hard as when first removed from the kiln: indeed, it is a rare exception to find a Roman brick in Corinium that has been at all acted upon by atmospheric causes; so that we may conclude that they were brought here from a distance, as the neighbourhood affords no clay that would make them of this good quality: this perhaps may account for the occasional use of stones, and the portions of old columns, which were found intermixed with the usual brick pilæ.

It was doubtless this cause which influenced the brickmaker—who would depend upon the quality of his article for his customers—to adopt a *method of marking* his more particular specimens of manufacture, such as the hollow bricks, or to stamp his name or initials, as we observed in some few instances, on the flanged tiles.

II. Floors where the hypocaust was absent were generally small, and without the more elaborate decorative details, but their substratum was prepared with great care, and every precaution was adopted against damp.

The ground was first prepared by beating it, so as to form a hard foundation, upon which was laid a stratum of gravel and bits of broken bricks and tiles: this, which was of irregular thickness, perhaps to meet varied circumstances, was also made firm and compact. Next came a layer of from four to six inches thick, made of mixed coarsely powdered brick, lime, and sand, united into a solid concrete; this was laid as smooth as possible, so that only a small quantity of the finer cement would be required to make the whole fit for the pavement: these three layers appear generally to have been made in accordance with the directions given by Vitruvius, by whom they are described as,

Nucleus
Rudus
Statumen

} which united make up the *Ruderatio.*

Upon this *Nucleus* tessellæ were laid in villas of importance, or in better rooms, but frequently these were dispensed with, and Corinium has furnished floors made of cement, and it is probable that only a portion of the floors were laid in mosaics in any building; this may have resulted as part of the plan, or it may have been left, in many instances, with the intention of adding tessellæ, at some more convenient period.

It would appear that these cement floors were sometimes coloured, after the manner of fresco, one of this kind having been mentioned to us by Mr. Gregory, of Cirencester, as occurring in the Leauses garden; but there is reason to believe, from its very liability to injury and destruction in such a situation, that this method for ornamentation for floors was not generally adopted.*

Details, with illustrations, of Roman and Samian pottery, Roman glass, works in metal, coins, urns, and tombs occupy much of the remainder of this volume. One of the most striking of the illustrations of metal works is perhaps that of a pair of compasses, of undoubted Roman origin it is said, but identical in every respect with the ordinary modern article, as if it were the great antiquarian prototype whence compasses have ever since been religiously copied, with the scrupulosity of an imitative talent worthy of China itself.

KENSINGTON PALACE FOR A NATIONAL GALLERY.

ALTHOUGH the evidence on the condition of the pictures in the National Gallery has been given before a select committee of the House of Commons, and consequently with closed doors to the public, yet it is pretty well understood to be universally unfavourable to their future conservation in the present locality.†

An idea was tolerably prevalent that a portion of the substantial erection first projected

* It may be remarked, as tending to throw some light upon the method in which these remains have been entombed in the manner we find them, that the floors are always covered up by a few inches of a finer kind of rubble, occasionally with reddish iron patches: this is no doubt due to the gradual falling of the plaster of the walls, by which, as it mouldered away when these houses were uninhabited by the Romans, the ornamental floors were screened from view. The successors in power, finding these habitations, when they began to colonize, either not suitable to their own tastes, or in too dilapidated a state for re-edification, built houses according to their own fancies, using the piles of stones of the Roman town as quarries whence could readily be procured the necessary materials. We should expect that, after so great a change as the fall of the Roman power in Britain, decay of the kind supposed would naturally ensue, and this accounts for the universal coating of the kind indicated, it is presumed, far more satisfactorily than supposing that this fine rubble covering was put down designedly, by the proprietor, to protect the pavement, in the hope that in better days he might return and find them unimpaired.

† Sir David Wilkie's nose in the statue placed in the hall of the National Gallery exhibits an effectual sample of the deposit arising from the infected atmosphere pervading the interior of the National Gallery. It would be a pity indeed if this visual demonstration were obliterated, until some change were determined on, as it may be regarded now to be a newly introduced instrument, called a dirtometer.

for the great Exhibition of 1851 in Hyde-park might eventually have been appropriated to the purposes of a National Gallery. The evidence before the committee generally recommended a movement westward; and so far the idea appeared to have a reasonable feature; but the decided opposition to occupy Hyde-park with any permanent building has entirely abrogated any such application of the industrial edifice of 1851.

We have now to look for a whereabouts westward, and Kensington Palace presents itself. Marlborough House, Pall-mall, is destined by the Crown for the residence of the Prince of Wales. The Vernon Gallery will have therefore but a limited term of occupancy, and, besides, this situation is now considered, according to the evidence, to be affected by the similar atmospheric destructiveness to pictures, so rife at Charing Cross. Pray God the youthful Prince's lungs may not suffer in such a malignant malaria!

Kensington Palace offers ready accommodation for three times the number of pictures we now possess belonging to the nation; and, in these stinting times, could be fitted for their reception at a very trifling cost to the public exchequer. The south front, facing the dial, contains on the upper floor a suite of admirably-proportioned rooms, occupying eleven windows of this façade. There are no attics or rooms above, and top-lights could be constructed with the greatest facility. They are now empty of furniture, containing only the Wallerstein collection of antique Byzantine, German, and Flemish pictures. A similar range of fine rooms are connected with this, forming the principal eastern front, and these apartments also are convertible into picture galleries by having no impediment to the construction of skylights by any rooms above them. Immediately behind this eastern front is a magnificent saloon called the Octagon Room, rising forty feet in height within, which would form a superb hall for large pictures, rivalling in proportion the famous great hall of the Louvre. This apartment may be distinguished, when viewed from the gardens, by the roof rising to an apex over the other buildings, and crowned on the summit by a stone sphere. Standing back from this eastern front, and continuing northwards, is another long range of fine apartments, presenting thirteen windows in its length, called the Queen's Gallery. This part is also uninhabited, and has been so since the demise of the Princess Sophia. Over this suite there are small, low attics, which could easily be removed, and converted into picture galleries whenever our national collection should enlarge to its requirement. This wing of the palace appears, from the monogram over the door at the extreme end, to have been built in the reign of William and Mary, and the pediment of the door is adorned with carving of flowers and fruit in high relief, and with some portions wholly detached: it has every quality worthy of Grinlin Gibbons, by whom it was probably executed, although now exposed, unappreciated, to the rudeness of the weather.

The only use made of any apartments among this vast suite of rooms, besides the southern front, is to contain some old furniture, and a variety of lumber removed from other royal abodes. A great quantity of it is so utterly tasteless and inappropriate to modern regal service, that it might as well be sold out of the way, and the money applied usefully. The portion that is good, useful, or ornamental, might safely be stowed in the large empty green-house adjacent, and thus free these fine apartments for a great and noble purpose. There are no inhabitants at all now living in the before-described part of Kensington Palace but the persons in care; and they could be easily located in the other divisions, among the families which, like at Hampton Court, have obtained a royal grant to reside therein. The isolation of a national gallery in this building from any danger of fire arising from the residents in the other part, could, from the distribution of the various buildings, be effected with the most perfect security.

No words need be employed to expatiate on the delightful situation of Kensington Palace, and its magnificent gardens, as an attraction to visitors of every degree. The popularity of Hampton Court to the public, notwithstanding its distance, is an ample proof of the general feeling for rational and intellectual enjoyment, when combined with healthful recreation.

IDLER IN LONDON.

MEMS. IN THE PROVINCES.

SOME additions and alterations are about to be made at the Bedford Lunatic Asylum, on plans prepared by Mr. T. Smith, the county surveyor.——Funds for the improvement of Church-street, Romsey, are being rapidly collected. Schools and residence are to be built west of the churchyard, at a cost of about 1,600*l.* already raised.——New school-houses are about to be erected at Inkberrow, Worcestershire, on plans furnished by Mr. A. E. Perkins, of College-yard, Worcester, architect.——The foundation stone of the New Tabernacle, Kingswood Hill, Bristol, was laid on Tuesday in last week. The chapel will be in the early English style, of Pennant stone, with Bath stone dressings. It will be divided into nave and side aisles, seats open. The design is by Mr. H. Masters, architect. The building will be 87½ feet within the walls, and 56 feet wide. The length of side aisles is 86 feet 6 in.; width of nave 26 feet; width of aisles 12 feet; total width, clear of walls, 50 feet. There will be piers and arches to carry clerestory windows flanking the nave. In front are two campaniles, set diagonally, available for access to children's gallery, with open porch between. The front is lighted by a triplet window. The roof is to be open timbered, and stained as the pews are; the walls are to be paved with tiles; the expense, including the boundary walls, will be, it is said, under 2,000*l.* It will accommodate about 1,300.——Lucton Church, near Leominster, is about to be pulled down, and rebuilt on plans by Mr. Cranston, of Hereford, architect.——The public baths at Warrington were opened on Saturday week to the public, at one penny each; Mondays and Saturdays to be thus devoted in the meantime to the public, and the other days in the week to the subscribers.——On Thursday week, according to a Liverpool paper, four eminent contractors sent in estimates to the Commissioners of Woods and Forests for the construction of the sea wall of the great float in the Birkenhead Docks. There are now upwards of a thousand men employed in the various portions of this work.——A national school with dwelling is about to be erected at Bolsterstone, near Sheffield, on plans by Messrs. Harrison, of Sheffield, architects, &c. ——*Punch* depicts the police luxuriating idly in the parks on Sundays, and the swell-mobility doing what they like with other people's own on the *first* day of the week, as a day made "sacred to idleness," in caricature of the *seventh*, as the type of creative rest,—but the police are likely, in sober earnest, to have a somewhat heavy *addition* to their Sundays' surveillance, if the example of the Sheffield gas stokers and cokers prove to be contagious. They complain, in the local *Times*, that their only exactive Sunday customers are the street lamps, the church lamps, and the lamps of those other temples devoted to less *spiritual* observances, —that the gas used on Sunday must be made on Sunday and attended to on Sunday,—and that they cannot see why they should be compelled to labour on behalf of these three "old lights," any more than the letter-carriers on behalf of the social, moral, and intellectual light of the community, on the day of days. They, therefore, virtually threaten to place the streets in darkness, and the churches also, as well as the gin temples, on the evenings of that day.——Public baths are to be erected at Heywood, Bury, as a tribute of respect to the late Sir R. Peel, and to be hence called the Peel Baths. Many a village and town might be thus perhaps readily supplied with such useful establishments at the present moment. At Heywood they even calculate on collecting a sufficient sum for public parks and pleasure-grounds for the working classes.——A considerable portion of a churchyard wall at Mark-lane, Leeds, gave way and fell on Tuesday in last week. Another portion had been shortly before rebuilt with palisades.——Seventy-five houses, according to the *Leeds Intelligencer*, are about to be built there on the Leathby-road Pottery Estate, on plans by Mr. Joseph Thompson, of Leeds, architect.——The Streets Committee of the Leeds Town Council on Monday week accepted the lowest tender of the thirty-seven sent in for making a large main trunk sewer, and several miles of branches. The works include about 15½ miles of sewerage, with sluice or flood gates, and occupation bridge; also two large cast-iron culverts under the river Aire. Messrs. Warren and Denroche, of Cardiff, South Wales, are to execute the whole for 34,650*l.* The highest tender was 97,800*l.* and the majority ranged between 40,000*l.* and 50,000*l.* Messrs. Warren and Denroche, it is said, have executed railway works in South Wales, and were connected with the contractors for the docks at Birkenhead. The 15½ miles included in the contracts just let are but a portion of the sewerage contemplated in the scheme of Mr. Leather (estimated to cost 80,000*l.*) for draining the three townships of Leeds, Hunslet, and Holbeck.——The Darlington Gas and Water Company have announced a reduction in the price of gas from 6s. to 5s. per thousand feet. A few years ago the price was 10s.——A police station is about to be erected at Welton, East-Riding, on designs by Messrs. Lockwood and Mawson, of Kirkgate, Bradford, architects. ——A school and master's house are to be built at Upminster, Essex; architects, Messrs. Kendal and Pope. The following are the tenders:—

	School and House. £.	Walls, &c. £.	Total. £.
Dowsett, Good Easter ..	800 ..	69 ..	869
Hammond, Great Warley	796 ..	70 ..	866
Curtiss, Stratford.....	744 ..	84 ..	828
Piper, London	693 ..	83 ..	776
Holmes, East Ham (accepted)	580 ..	60 ..	640

WESTMINSTER BRIDGE.

IT is much to be regretted that of the six principal bridges which cross the Thames in London, four of them—viz., London-bridge, Southwark-bridge, Westminster, and Blackfriars—should all have exhibited symptoms of settlement and insecurity: with regard to the last of these, namely, Blackfriars, if great precautions are not taken, the time is not far distant when the whole fabric will be precipitated into the river without giving hardly a minute's notice: indeed, the wonder is that it had not long before, notwithstanding the large sum expended lately upon its renovation.

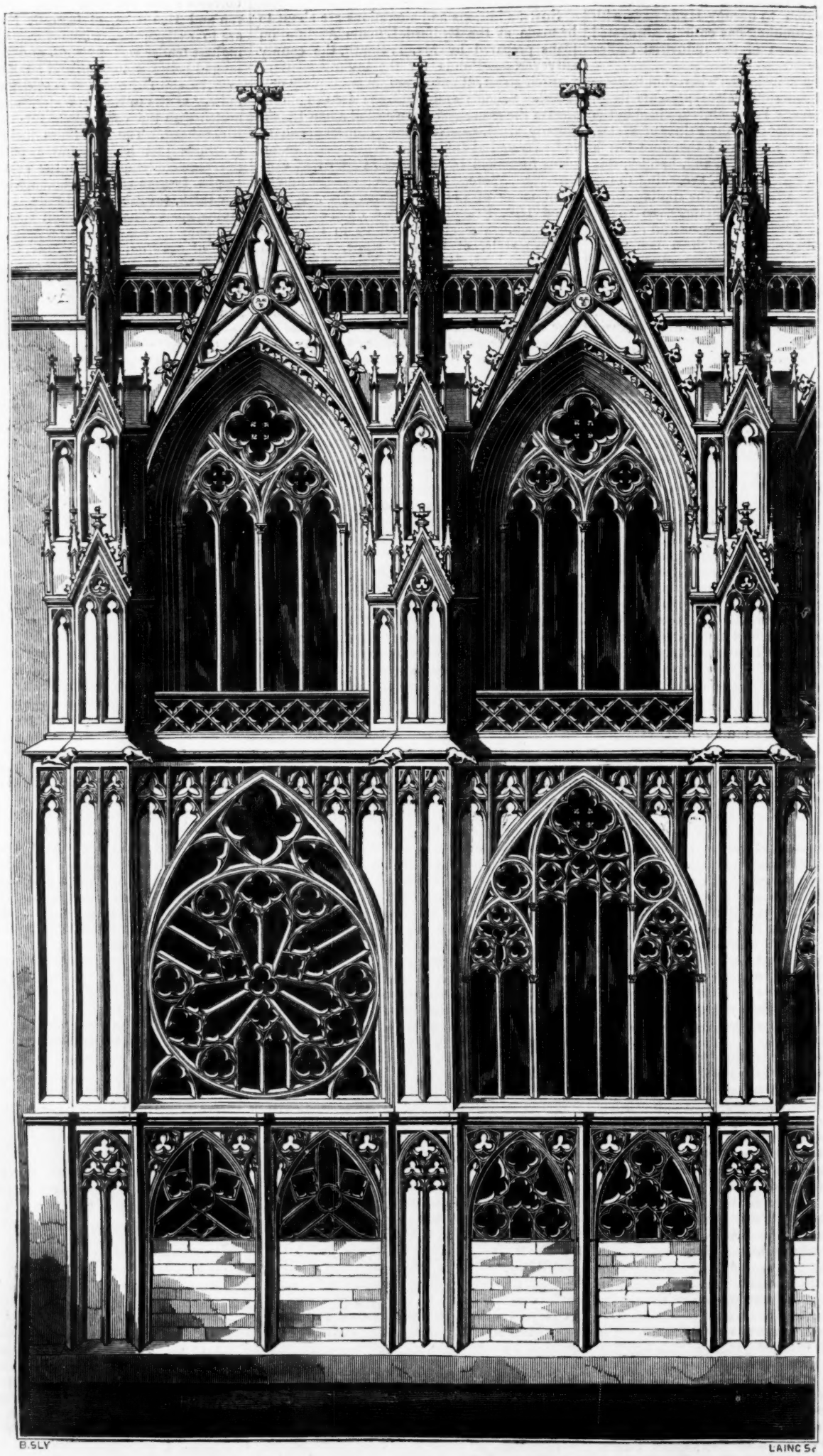
With our present improved knowledge of bridge-building, let us suppose that a new bridge be constructed at Westminster, consisting of five openings, each about 160 feet wide, the piers of granite or some other equally durable stone, the arches of well-seasoned timber covered externally with ornamental cast iron of suitable Gothic design, and well painted: —such a structure might be made of great beauty of design, and of sufficient durability to last for centuries, with a little ordinary repair: its appearance would far exceed anything of the kind in the metropolis, and its entire construction might be effected for about 200,000*l.* and completed in three years, while the stone of the present bridge would amply repay the expense of the temporary one, which would be requisite while the new bridge is building.

That a bridge of this description would be much cheaper and lighter than one built entirely of stone, and much safer and more durable than a suspension bridge, there can be no doubt; and if a plan similar to the one here suggested were adopted, it would effect considerable saving of the public money, and adorn London with a novel and beautiful structure.

E. E. M.

CALIFORNIAN QUARTZ FOR THE WASHINGTON MONUMENT.—A block of gold-bearing quartz has been procured, at the expense of the State of California, to be contributed in the erection of the proposed monument at the seat of general government. Each of the States is to be represented by a block of stone from native hills. The Californian block is from the Mariposa diggings, near Fremont's mines, and weighs about 125 lbs. In shape it is irregular, approaching a square, its sides varying from 18 to 20 inches in length. It averages in thickness 9 inches—across its surface diagonally it is 21 inches by measurement. Very little gold is perceptible to the naked eye, but it is estimated to contain about eighty dollars' worth.

ST. CATHERINE'S CHURCH, AT OPPENHEIM.



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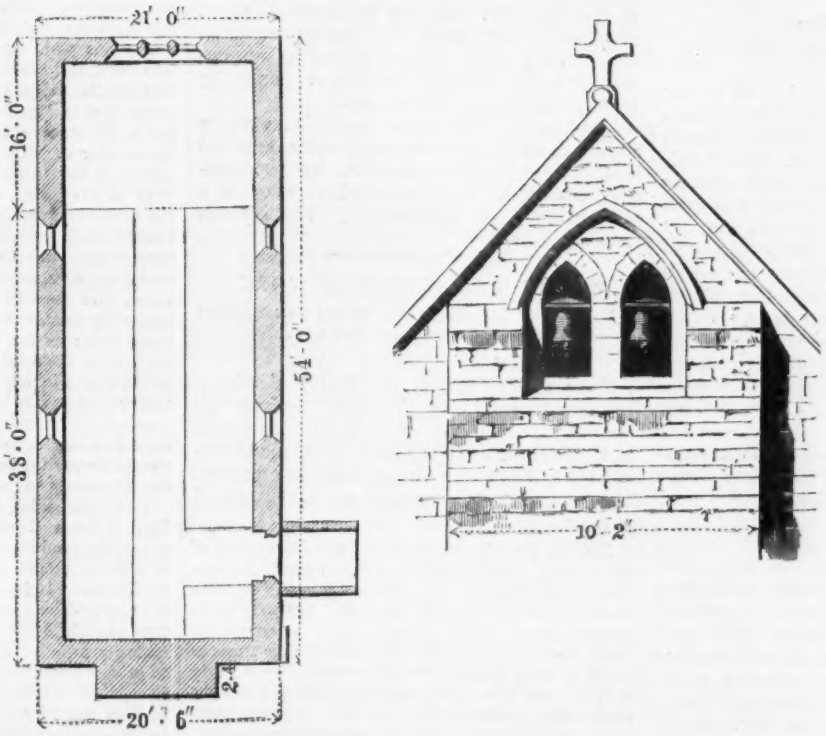
KENTCHESTER CHURCH, HEREFORDSHIRE.



ST. CATHERINE'S CHURCH AT OPPENHEIM.

THE south side of St. Catherine's Church, at Oppenheim, shown by the accompanying geometrical view, is a fine specimen of German Gothic architecture, belonging to the beginning of the fourteenth century. The enclosing wall of the first story is flush with the face of the buttresses; and the covering forms a balcony or narrow platform, between the buttresses. The height to the top of parapet from the ground is about 68 Rhine feet,—to the top of the parapet an aisle about 42 feet. The clerestory windows seen above are of large size.

KENTCHESTER CHURCH.

THE accompanying drawing contains a view, plan, and details of the west gable of Kentchester Church, situated a few miles, in a westerly direction, from the city of Hereford. It is an extremely small, but picturesque structure, interesting both to the artist and architect, and is an example of what may be effected by small means, skilfully applied. It is of the simplest plan, being of an unbroken oblong shape, not exceeding 50 feet in length by 17 wide in its internal dimensions. There is a small south porch, and the chancel is marked, externally, by a slight depression of the ridge of the roof, and internally by some carved timber-work, under which formerly stood a screen. But the most remarkable feature of the whole structure is the singular provision of a bell-turret in the gable of the west end, in which are placed two lancet-pointed openings over a large buttress, which occupies half the width of the west-end, branching into two smaller ones on either side of the niches, and which will be better understood by reference to the drawings. In the niches, which are quite devoid of enrichment, are placed two bells, which are rung from the interior of the church. The parish is of small extent, and but thinly populated; it is, nevertheless, remarkable for its fertility and pleasant scenery, and still more for having contained within its area the *magna castra* of the Romans—one of their most important military stations, and which, in the time of Caractacus, must have afforded a striking contrast to the present peaceful aspect of the locality.

JOHN CLAYTON.

THE "GENTLEMAN'S MAGAZINE" has been to the mill to get young again. The August number is excellent, nicely varied, and pleasantly illustrated.

BATTERSEA PARK AND ITS RUINOUS CONSEQUENCES.

IN last week's *London Gazette* there will be found among the bankrupts, the name of Henry Hart Davis, of Battersea, builder. He was brought up this week in custody from the Queen's Bench before Mr. Commissioner Fane, for the purpose of being liberated from that prison. Davis is one of the unfortunate wights who have property in that part of Battersea designed for a considerable time to be formed into a park for the public recreation and amusement. Davis obtained a lease for ninety-nine years of some land which he underlet, and thereby netted a considerable income, when the under-lessees were served with notices by the Government not to proceed with the buildings. The property as time rolled on became deteriorated: Davis sent in his claim to Government: but unfortunately the Legislature, while it has given the Government the power and option to take property on its own terms, has not bestowed upon the claimants the ordinary right, as in railway and other matters, of having their claims adjusted before a compensation jury. The apathy of the Woods and Works has been attended with serious privations and disastrous consequences. One builder, named Budge, erected fourteen carcases, and

was served with notices to discontinue: the result was that Budge, not possessing an independent fortune, was forced into bankruptcy, and the erections are now dropping to ruin. Lord Denman granted a rule *nisi* for a *mandamus* to compel the Commissioners to proceed, but that learned and noble lord having retired from the judicial seat before the matter came on for argument, Lord Campbell held that the Commissioners were merely trustees for the public, and were not bound to take any steps until they had the necessary funds in hand for the completion of the park. Thus law is opposed to justice, and the park remains *in statu quo*. The landowners have since offered the Government to take debentures instead of money, if they will proceed with the project. This has been met by numerous actions, claiming on behalf of the Crown the banks of the Thames. Mr. Cubitt is one of the defendants, and the Royal demand includes the willow banks of Barnes, Fulham, and Mortlake, the wharfs of the City of London, the Isle of Dogs, and the banks of the Clyde. It is thought that one action might have been sufficient to decide the right of the Crown, but the active and zealous advisers of the Commissioners entertain a different opinion. Davis, who, it is said, could pay forty shillings in the pound if his claim upon Government were settled, was released from "durance vile" by Mr. Commissioner Fane.

FALL OF A MILL AT STOCKPORT.

ON Monday last, a large portion of a new mill at Stockport fell suddenly to the ground, and, so far fortunately, at dinner-hour, though ten or eleven persons were killed. The building was a fire-proof one, and only about a month occupied. The walls, which, it is said, were apparently substantial enough, were 47 yards long and 20 wide, in four stories, and rested on the solid rock, but down the centre of the mill ran a row of iron-ribbed pillars, 26 feet long, 14 inches diameter in the centre, and tapering to 8 inches diameter at each end. On the heads of these pillars the flooring beams, from which sprang the fire-proof arches over the first floor, rested. The pillars were 10 feet apart, with one intermitted, second from the west end, where, in order to support the intermediate flooring, a large and heavy iron flange beam, with an arched top 3 feet 4 inches deep in the centre, was carried longitudinally down the mill, supported on the heads of the two nearest pillars. To the centre of this beam the flooring beams from the outer walls were carried. The accident occurred just at this point, so that the construction of this beam and the adjoining pillars should be looked to when the rubbish has been cleared away. One man states that he saw some arches near one of these pillars first give way. Strict investigation should follow.

DOINGS IN DUBLIN.

THE Board of Superintendence of City Prisons are at present making alterations to Richmond Bridewell, for the purpose of enabling them to carry out the "separate system" in a large portion of the building. The divisional walls of the class-yards have been taken down and re-erected on a radiating principle, by concentrating them to a certain point, which is used as an inspection hall. The plan of the hall is semi-octagonal, 10 feet wide, and as it is in immediate connection with the prison, there is a means of surveillance afforded to the governor and his officers: the walls are of hammer-dressed black stone; the dressings of doors and windows, copings of yard walls, &c. of chiselled granite. The tread-wheel buildings have lately been augmented, and fitted up with new seats and metal partitions. A reservoir (in connection with the tread-wheel) 10 feet long by 8 feet wide, has been recently erected; it is plastered on the inside with Roman cement, vaulted, lined, and floored with stock bricks: the floor rests on a bed of concrete 18 inches thick. The cost of these alterations was 105*l*.

The Board have also lately erected a drying closet at Grangegorman Penitentiary, and fitted it with heating apparatus, &c., complete, which was furnished by Mr. Turner, of Hammersmith Iron Works: the cost was 100*l*.

The foregoing works have been executed under the superintendence of the Board's architect, Mr. John S. Mulvany.

The City of Dublin Grand Jury are erecting additional buildings to the Sessions Court-house, Green-street, for the accommodation of prisoners pending trial, the present arrangements having been found inconvenient and inadequate. Messrs. Murray and Denney are the architects.

The Commissioners of National Education in Ireland have advertised for tenders for the erection of model agricultural schools at Gormanstown, county Tipperary, and Athy.

The works at the Dublin terminus of the Midland Great Western Railway are rapidly approaching completion: the cornice and parapet on the Directors' house are laid all round, with the exception of the centre projection, on which the place of the cornice is to be supplied by an ornamented cove, supporting a pediment of Egyptian character. The stone is the same as that of which the Drogheda and Great South-Western Railway termini were built, and is supplied from Ballyknockin quarry. The Colonnade and booking-offices are complete. Mr. Mulvany is the architect.

The Dublin Mechanics' Institute, having succeeded in collecting the sum of 200*l*. required by Mr. Atkinson, of College-green, previous to his contributing his donation of 100*l*. towards the decoration of the theatre of the institute, are, we understand, about advertising the same for public competition. They also purpose providing accommodation for a larger number of pupils by erecting additional class-rooms.

The firm of Todd, Burns, and Co., purpose adding to their premises, and have received tenders according to plans, &c. by Mr. Caldbeck, architect. It is intended to take in a large portion of Jervis-street. The style is Grecian.

RATING GAS COMPANIES' WORKS.

THE PHŒNIX GAS COMPANY *versus* THE PARISH OF CHRISTCHURCH, SURREY.

THIS was an appeal, at Surrey Sessions, by the Phœnix Gas Company against the amount at which they were rated by the parish of Christchurch on the poor's-rate made October 25, 1849, for the Midsummer quarter. The particulars will be useful to those engaged in rating.

Mr. M. Chambers opened the case in support of the appeal, which he said was one of great importance to the Phœnix Gas Company, as the decision would settle the principle on which they were to be rated in twenty-three parishes, and, if given against them, they might have to pay three or four times as much as they ought if their property were fairly valued. In this case they appealed against the assessment of October 25, by which the appellants were rated at 818*l*. on their gross estimated rental, and at 683*l*. as the rateable value of their gas mains in the respondents' parish. They were surprised and astonished at being so rated, because the previous rateable value of such mains was only taken at 90*l*.: accordingly they felt bound to appeal. In the respondents' parish they had no gas works for the manufacture of gas, but simply pipes for the purpose of supplying gas to the parties requiring it in the parish, and to the public lights, as also pipes for the purpose of conveying gas for distribution in other parishes. They had three stations for works for the manufacture of gas; one at Bankside, one at Greenwich, and a third at Vauxhall; they also had two gasholders or reservoir stations, where gas was contained for the purpose of being distributed in other parishes, one being in Wellington-street, St. George's, and the other near the Oval, Kennington. What he also had to contend was, that the proper way of apportioning the total rent was by the cubic contents, and not by the length or superficial surface occupied by the pipes, or by the amount received for gas sold. He should contend that they were not to be rated according to the length of pipe in the parish, or the superficial area, but that the justest and most proper way was to take the cubical contents, or, in other words, the capacity of the pipes for conveying gas. An appeal had already been tried by the Kent Sessions against the rate made in the parish of Greenwich. In that appeal the Kent Sessions adopted the superficial area. They did not shut up their books nor keep back any statement, but they said the just mode of rating was according to their actual expenditure and receipts, according to Act of Parliament: it was not on their profits of trade, but on their receipts, after the deductions allowed by Act of Parliament, that they contended they ought to be rated. That is, they contended that, looking at what they had done with the land which they occupied, the fair criterion of value, as required by Act of Parliament, was what a tenant would give if he were to hire it. The company, therefore, opened their books to the inspection of the respondent parish, so that if there were anything incorrect they might be able to state to the Court where they thought the appellants were wrong. The principle on which they had proceeded was according to the strict rule enjoined by the Act of Parliament. First of all they took the net profits, and then made the statutable deductions allowed by the Act of Parliament, and that gave them what they considered the rateable value. A gentleman named Lee had been employed for that purpose. First he ascertained the total receipts, from which he deducted the payments: that gave of necessity the net balance of profits; but having done so before arriving at what a tenant would give, they must make certain further deductions. In the first place, as regarded a concern of that description, it was obvious that there must of necessity be a large floating capital, which, like the capital involved in a silversmith's shop, must remain constantly invested, and with regard to which there must be an allowance, or per centage, in order to make it worth a tenant's while to take the property. For that purpose a certain sum had been taken as a floating capital, on which Mr. Lee had allowed a per centage of 5 per cent. as interest. He had then taken 12½ per cent. as tenant's profits. Now, in some cases as much as 20 per cent. was allowed as tenant's profits, and in manufactures a higher per centage was generally allowed than in farming and other matters. Mr. Lee said 12½ per cent. was a fair allowance for tenant's profits in this case. Then deductions were made for insurance, renewal of buildings, and trade fixtures, works, pipes, &c., and that left the balance at which the works ought to be rated, that is, the stations containing gas manufactories, the stations for gas reservoirs, and the pipes spread over the twenty-three parishes. Having thus arrived at the proper balance on which, if the whole were in one parish, the rates ought to be imposed, the next thing was to divide that amount among the twenty-three parishes, and the course pursued in that respect was to value the whole of the land, buildings, apparatus, and mains, and take the total value, and then to take the value of the pipe: having so done, the next step was a mere rule of three sum: as the total value of the works and pipes is to the total rateable value, so is the value of the works in any parish to the rateable value in that parish. Having gone through that mode of proceeding, he arrived at the conclusion that, with regard to the rateable value of the pipes in that particular parish, the amount at which the Phœnix Gas Company ought to be rated was 113*l*.*

Evidence having been given as to receipts, &c., Mr. William Innes, assistant engineer to the company, produced accounts showing the quantity of coal consumed at the various stations down to Midsummer, 1849. It amounted to 39,068 tons for the year. The quantity of gas manufactured from that was 352,322,000 cubic feet. The rental for the quantity supplied was 72,498*l*. 17s. 3d. The price to private consumers was 6s. per thousand, and to the public burners about 4s. The amount of leakage was 22·9 per cent., 77·1 per cent. of gas being actually burned. The amount of leakage was ascertained by deducting the quantity consumed as shown by the meters from the quantity measured into the reservoirs before distribution commenced. The quantity consumed by the public lamps was ascertained by fixing meters to several, and taking an average of the results. He accounted for the large amount of leakage by the number of main pipes used to convey the gas to the consumers. The whole quantity of main pipes was upwards of 440,000 lineal yards, or about 250 miles. The quantity of coals carbonized at all the stations in the year ending Midsummer, 1849, was 39,068 tons. The greatest number of retorts in use during that time was 591; that was at Christmas, when they always made a much larger quantity of gas. The average number of retorts in use for the whole year was 448. The retorts were "charged," that is, the coal was put in four times in twenty-four hours. The average weight of coal carbonized in each retort in the twenty-four hours was nearly 6 cwt., or 1½ cwt. to each charge. The retorts were all iron. A large deposition of carbon took place in the inside of the retort during the process of carbonizing the coal, so that, after being in use some time, an old retort would be incapable of taking so large a charge as a new one, owing to the incrustation on the inside. The average quantity of gas made at their works from a ton of coal was nine thousand cubic feet. If a larger quantity were made, the quality would be considerably deteriorated.

Mr. Lee was then called and examined by Mr. Chambers.—Is an architect and surveyor. Had valued Battersea, Wandsworth, Putney, Wimbledon, St. James (Westminster), and Lambeth.

* Mr. Chambers's speech, and the case generally, is reported, at length, in the *Journal of Gas Lighting*, for July 10, 1850.

Had surveyed and valued the lands, buildings, and mains belonging to the Phœnix Gas Company, with a view of ascertaining how they ought to be rated. Had made out a valuation and calculation from returns furnished to him by the company:—

Net Balance of profit for twelve months			£22,641 1 2
Deductions to arrive at the gross estimated rental:—			
Five per cent. on the capital employed by the tenant, viz. in six months' expenses	£30,804		
Do. on present value of the meters, the cost being 22,560*l.*	15,000		
Do. on the present value of the retorts	7,731		
Amount of tenant's capital	£53,135		
Five per cent. on the above is		£2,656	
Amount of tenant's profits, being 12½ per cent. on 53,135*l.*, the capital required, is...		6,642	
Amount of interest and tenant's profit for twelve months			£9,298 0 0
The gross estimated rental of the whole property ...			£13,343 1 2
Statuteable Deductions:—			
The rates and taxes are previously deducted.			
Insurance on buildings ...		£162	
The annual repairs of buildings are previously deducted			
For renewal or reproducing 2 per cent. on the following, viz.:—			
Trade Fixtures	£39,672		
Utensils	12,945		
Mains on the stations ...	6,271		
Street Mains	105,760		
Total value	£164,648		
Two per cent. on this is		£3,292	
Total of insurance and renewal			£5,464 0 0
Net rateable value of the whole property			£9,889 1 2
Total saleable value of all the stations			£170,386 0 0
Do. of all the street mains laid			105,760 0 0
Total saleable value of all stations and mains			£276,146 0 0
Quantity of Street Mains:—			
In Christchurch parish there are 9,160 yards lineal of mains, various sizes, the contents being in cubic yards			155
In all the other parishes there are 431,814 yards lineal of mains, various sizes, the contents being in cubic yards			5,074
Total cubic yards of street mains in all the parishes			5,229

To divide the net rateable value of all the stations from the net rateable value of all the mains:—

If 276,146*l.* (the value of all the property) give 9,889*l.* as the net rateable value of all the property, what will 170,386*l.* (the value of all the stations) give?—Answer, 6,101*l.*

Net rateable value of all the stations	£6,101
Do. of all the mains	3,788
Net rateable value of the whole	£9,889

To obtain the net rateable value of the street mains in Christchurch parish only:—

If 5,229 cubic yards (the total quantity of street mains) give 3,788*l.* as the net rateable value of the whole of the mains, what will 155 cubic yards (the quantity of mains in Christchurch parish) give?—Answer, 113*l.*

He had included in his calculation of 6,101*l.* for stations, the connecting main passing through the parish of Christchurch, between the station in Bankside and the large reservoirs in Wellington-street. It is fourteen inches bore, and the part passing through Christchurch is 545 yards in length. The value and cost of laying down would be about 22s. 6d. a yard. It weighs 307 lbs. a yard, and the cost would be 6s. 6d. a cwt. It would cost 3s. 6d. a yard for laying down.

By the Chairman.—He considered 9,889*l.* to be the value of this property, including buildings, machinery, and all fixed apparatus, if the company wished to let it to an individual or another company, and that a company would give that sum for the property to carry it on as a gas works. Had made certain deductions in his statement, on account of this being a company.

Mr. Bodkin replied on behalf of the parish. He said that they were all agreed that the sum they were here endeavouring to discover is, what a tenant would give to occupy these works and carry on the trade, and to provide for such expenses as the law permits to be charged against the tenant's rent. The principle, therefore, is very clear; and there would be no great difficulty if the whole of the works were situated in one parish, but as they extend over several, that created considerable difficulty, as the Court would have to decide not only on some matters of fact, but also some questions of law. Here was a company having a large capital of some four or five hundred thousand pounds in this concern; and if they started with the assumption that 9,000*l.* was the sum at which these works ought to be assessed to the poor, in the absence of the accounts of the company, he thought it was not unreasonable on the part of the parish officers, who, not having a true basis of calculation, had had recourse to other tests, one of which was to ascertain the cost of the works, and assume that five or six per cent. might be taken as the return for which a company might be expected to embark its capital. Applying this rule, they would have some very large sum as the probable result of such a mode of calculation. Mr. Bodkin then proceeded to impugn the various items of the accounts, and made the total expenditure 54,304*l.*, which, deducted from 89,678*l.* which he had made the receipts, left a balance of 35,374*l.* He had now arrived—subject to such control as the court might think fit to exercise—at the first stage of that inquiry, that is the difference between the actual receipts and the actual expenditure of the company, which was the first thing that a tenant would look to in order to find what he might give. Here was a concern with a gross profit of 35,374*l.*; and the next step was to ascertain what proportion of that sum a tenant could afford to pay as rent. The way in which that was put before them by the other side, without any evidence except that of Mr. Lee, who put in an arrangement of figures, was only an assumption that certain liabilities would be requisite to enable a tenant to carry on such a business. He thought it was a mere matter of opinion which would be entirely a question for the court. In the first place, it was said that a man embarking in such a concern would require a floating capital equal to six months' expenditure, that is, 30,804*l.* They also said he would require the value of the meters, 15,000*l.*, and of the retorts, 7,331*l.* making a total capital required to carry on the concern of 53,135*l.* Was ever any thing so preposterous as that a concern where the returns were quick, the rents being received quarterly, and three months' credit given for the materials, if required, would require such a capital! Nobody who ever carried on a gas work had been called to say whether it was correct or not. He contended that the only capital required was what he would have to pay ready money for during a period of three months, because, at the end of the first quarter, he would begin to receive his returns. He then came to what in this case was a question of considerable difficulty, the works of the company running through a number of parishes. This was the proportion of that rateable value which ought to be allotted to the several parishes. The sum to be divided, after deducting 5,068*l.*, the value of the stations, at which the parishes actually rated them, was 22,972*l.* in one case, or 25,000*l.* in the other. He believed it would be found, on a calculation of the figures given them, that if the company's mode of distributing this sum was to be taken, that is, according to the capacity of the mains, the parish would be entitled to 3 per cent. on the amount left to be distributed: that is, by comparing the capacity of the mains and pipes in the parish; but if his principle of distribution with regard to the money received for the supply of gas in the several parishes was to be taken, their proportion would be 5 per cent. That was now the difference between them. The one mode gave them 3 per cent., and the other 5 per cent.; but whether, the court took 3 or 5 per cent., the result would support the particular rating in this case. The actual rate was 682*l.*; now 5 per cent. on 25,000*l.* would be 1,250*l.*, and 3 per cent. would be 750*l.*

The Chairman said, we have given our best attention to this case, and have gone through all the figures, and we come to this conclusion, that we must disallow some of the deductions made on the part of the gas company, and that will bring up the total rateable value to 16,089*l.*, instead of 9,889*l.*, as stated by the company. That is our decision with regard to the figures. With regard to the principle of division, we think it would be very inconvenient to base it on gas rental, and we have therefore gone on the principle of capacity for distribution. On this principle we find that the rate should be 326*l.* 13s. 9d., instead of 682*l.*, and we therefore decide that the rate-book should be amended from 682*l.* to 326*l.* 13s. 9d.

Mr. Bodkin.—Have you allowed them for renovations?

The Chairman.—Yes; we admit the principle, but not exactly the amount. We have made a distinction between the two first items and the two last. We allow 2 per cent. on trade, fixtures, and utensils, and 1½ per cent. on mains.

Mr. Bodkin.—What sum do you take off for the valuation of stations? The company say that they amount to 6,101*l.*, but they are only rated at 5,068*l.*

The Chairman.—We have taken the amount at which they are actually assessed. We do not add anything for the connecting main between Bankside and Wellington-street, as that is allowed for in the measurement of capacity. The Bench will grant a case to the Queen's Bench on the legal points at the request of either party.

NEW YORK.—The erection of the Jenny Lind Hall in New York is rapidly progressing, about 150 men being variously employed in connection with it. The building will be 150 feet long by 50 broad, and 90 feet in height, and will cost, it is estimated, about 80,000 dollars.

RAILWAY JOTTINGS.

THE Great Northern line is ready for opening on the 7th inst., from London to Peterborough, a stretch of 76 miles. The total area of rail that will be connectedly thrown open on the occasion will be 220 miles, with termini at Peterborough, Boston, Lincoln, Hull, Gainsborough, Great Grimsby, and York. Of this mileage 76 miles consist of the trunk, and 144 miles the Lincolnshire loop, with links and branches. When the Towns' line between Peterborough and East Retford, and other branches, are completed, the Great Northern will represent a network of railway, north and south, little short of 300 miles, constructed at a cost of between 7,000,000*l.* and 8,000,000*l.*, and so far on a much less costly scale than any other line in the kingdom. Arrangements on an extensive scale have been made for a large coal traffic, at reduced prices, to be brought from the South Yorkshire coal fields.——The works of the Oxford Deviation line of the Buckinghamshire Railway are about to be executed from Islip to Oxford, a length of about 6 miles, on plans by Mr. Dockray, of the Euston station.——The fourth tube of the Britannia Bridge has been safely floated to its place.——The Institution of Mechanical Engineers, are getting up a subscription, it appears, for a suitable monument in honour of the late George Stephenson, the maturer of the locomotive. "The place for depositing it," says a contemporary, "is not yet fixed upon; but it is understood that the authorities at Westminster Abbey have made some objection to placing the monument in that edifice, and Saint Paul's has been suggested instead."——On Monday week the Dumbartonshire line was opened for traffic.——A correspondent of the *Athenæum* has revived what he may not be aware is an old semi-serious suggestion of our own, for the speedy conveyance of letters, &c. "Introduce," he says, "into a solid metal tube communicating between the places a metal sphere or canister filled with letters, &c. (or a series of them linked together): exhaust the tube by means of a stationary engine similar to that used on atmospheric railways, and in a very short time it will deliver its burthen at its destination. This plan, though of course not so rapid a mode of communication as the electric telegraph, has other advantages over it."

Miscellanea.

FREE OPENING OF ST. PAUL'S.—On Mr. Hume, in the House of Commons, moving the resolution already noticed, Sir G. Grey stated that the dean had written to him to the effect that the vergers had been for a long period the sole irresponsible receivers of the payments for admission, of which no account was rendered to the chapter; and that the control of the Ecclesiastical Commission over the revenue presented a difficulty in compensating the vergers. Sir G. Grey had communicated with the latter, who said they had found that they were not authorised by law to sanction the arrangement proposed by the dean. Some alteration of the law might therefore be necessary, but, added Sir George, I will communicate further with both the dean and the commissioners, in the hope that some arrangement may be made by which the object can be obtained.

THE "THANKSGIVING MODEL BUILDINGS."—The following tenders were delivered July 20 for the "Thankgsgiving Model Buildings" to be erected in Portpool-lane, Gray's-inn-lane, by the Society for Improving the Condition of the Labouring Classes,—Mr. Henry Roberts, Hon. Architect:—

	For Dwelling-houses for 20 families and 128 women.	For Public Wash-houses.	Total.
	£	£	£
Geo. Bird	6,800	1,320	8,120
Haward and Nixon	6,650	1,419	8,069
W. Cubitt and Co.	6,551	1,359	7,910
T. & W. Piper....	5,907	1,080	6,987
Lock and Nesham	5,900	990	6,890
Sam. Grimsdell....	5,655	1,210	6,865

The dwelling-houses are to be of fire-proof construction, similar in principle to those built by the society in Streatham-street, Bloomsbury. The wash-house is not entirely a new building, and the boiler, tank, and pipes are not included in the contract.

SOCIETY OF ARTS PRIZES.—To be able to speak in praise of an individual or of individuals is far more grateful to the feelings of an honest man than the necessity of doing the contrary, yet occasions may arise when the submitting to the pain of the latter will become an imperative duty, compelling him to act the gratuitous part of a censor. I trust you will, as one of the best friends the artist has, allow me to give a slight twitch to a public institution calling itself the Society for the Encouragement of the Arts, &c. but which ought to be called otherwise. His Royal Highness Prince Albert some time ago, in addressing a deputation from the society, impressed upon them the necessity of encouraging the decorative arts with a view of improving the character of British manufactures, and no doubt the deputation went home with a fixed determination to follow the recommendation, the result being the issuing of a yearly list of premiums, which scarcely a student in any of the schools of design thought it worth while to try for at first, and which those even who got prizes now consider perfectly beneath their notice, accompanied as the list of prizes is by a most dilatory system. It is a fact scarcely creditable that some of the candidates in the last competition have had to wait from January 1st until now in suspense as to the result of their efforts, and that then the paltry premium of five pounds in the case of a design for a fire-screen was reduced to three. Even if this design did not come up to the standard of taste which the art-committee are in the habit of consulting, it was still entitled to the full premium, it being the best submitted; but I have good authority for stating that it was a good design, which had cost a great deal of research, and to which a great deal of consideration had been given; but it was an outline, whereas it should have been illuminated. I have enclosed a list of the prizes, and I submit whether you think the beautiful ornamental composition of the ancients or of the *cinque cento* were elicited by the like encouragement. Three pounds for a dinner plate; five pounds for a model of a candlestick, and so on; the largest amount being ten pounds for a tea-urn, but which is likewise very modestly requested to be accompanied by a full-sized model.—W.

COPYRIGHT OF DESIGNS.—The first clause of the new bill enacts that any design or invention not previously published may be "provisionally registered" for one year, upon application to the registrar. Clause 4 enacts that articles made after the design or invention cannot be sold during the period of provisional registration, without forfeiting the right to this protection, the provision not, however, hindering the proprietor from selling his sole property or right in that design. Clause 5 provides that the period of provisional registration may be extended for six months, on the decision of the Board of Trade. Clause 6 sets forth that the provisional registration will extend to sculptures, models, copies, or casts, within the protection of the Copyright Act. Clause 7 provides that, in case of piracy of any such model, copy, or cast, the person so offending shall forfeit not less than five or more than thirty pounds; the penalty payable to the proprietor of the infringed article. Clause 8 enacts that designs for the ornamenting of ivory, bone, papier maché, &c., may be registered under the Designs Act of 1842, for three years. Clause 9 provides that the Board of Trade may extend copyright in ornamental designs for an additional time not exceeding six years. Clause 11 provides, that in certain cases to be judged of by the registrar, drawings of the designs may be dispensed with when application is made for provisional registration.

ECCLESIOLOGICAL LATE CAMBRIDGE CAMDEN SOCIETY.—Meetings of the Committee of this society were held on June 12 and July 20. In a letter of thanks for the society's grant to Sydney cathedral, the Rev. G. Gilbert called attention to some glass now missing from Canterbury cathedral. A grant of 5*l.* was made in aid of the fund for a testimonial to the late Dean of Hereford, by filling with stained glass the eastern windows of the Lady chapel, and, if possible, finishing that part of the cathedral. It was also resolved to undertake the coloured ornamentation of one bay of the nave in the round church of St. John, Little Maplestead; or, in the event of the works not proceeding so far, some equivalent decorative work. An account of the discovery of some Romanesque portions in the present church of St. Nicholas, Aberdeen, by Mr. G. J. R. Gordon, was submitted; and some corrections and additions to the "Handbook of English Ecclesiology," were received from Mr. J. J. Rogers, of the Temple. It was agreed that the publication of the number of the *Instrumenta Ecclesiastica*, due in July, should be deferred till September; and the Committee, with the assent of Mr. Butterfield, resolved in future to invite drawings of details, &c., suitable to the series, from any quarter,—especially from the professional members of the society, and to adopt any that might appear likely to be useful. An advantage of this plan would be, it was thought, that it might bring the skill of younger architects more under the notice of the committee. A fit person having been found to undertake the details of funerals in a religious and correct way, it was agreed to issue proposals for a burial guild, and to receive the names of persons wishing to co-operate.*

THE GLAZING OF THE GREAT GREENHOUSE.—A correspondent is very desirous that the glazing of the building for '51 be creditably performed. He says,—"The glazing alone will employ about 150 glaziers, for ten weeks, and as that number of respectable workmen will be rather difficult to collect, they will require efficient superintendence, or half the glass will be put in without proper bedding, and the risk of leakage much increased. Probably 150 tons of putty will be required, and, as new putty is unfit for use, it ought to be made immediately, and when required for use a number of labourers employed to beat it and hand it to the glaziers. The general complaint of the scarcity of artistic workmen is frequently exemplified by glaziers in glazing ornamental glass, which has, since the removal of the excise duty, come into extensive use: we frequently see the ornament placed upside down, and, where the ornament is shaded, the shadow in all directions in the same window, and frequently at the junctions of the squares the figures are so badly arranged and broken as to be a disfigurement instead of a decoration. A few hints would attract attention to the subject, which only requires such friendly admonition to be avoided."—W. H. J.

STATUES.—Mr. Calder Marshall has completed his statue of Clarendon, for the new Houses of Parliament, and Mr. Foley his statue of Hampden for same place,—both very successfully. Mr. Edward Davis has finished the model for the bronze figure of the Duke of Rutland, to be set up in Leicester.

GLASTONBURY ABBEY.—The interesting ruins of Glastonbury Abbey, the abbey barn, &c., are to be sold by Mr. Frederick Chinnock in the course of a few days. An illustrated catalogue has been published, which is very superior to attempts of this kind generally.

BUILDERS' BENEVOLENT INSTITUTION.—The annual meeting of this charity was held on Tuesday last, at the London Tavern, Mr. Cubitt, M.P in the chair, when the secretary read the report for the past year, from which we are glad to perceive that satisfactory progress has been made. The amount received in donations and subscriptions for the year ending June 1850, is 1,028*l.* 15s. 6d., inclusive of 400*l.* subscribed at the dinner on the 4th of June, with the first annual subscription of 20*l.* from Col. the Hon. E. G. D. Pennant, M.P. The profit derived from the ball in January last amounted to 98*l.* odd. Besides the four pensioners elected in October last, and a poor widow who died a few days after her election, the directors have resolved on another election of five pensioners in October next. The present funds of the Institution are 1,100*l.* stock to the relief fund, 500*l.* to the building fund, and balance at bankers 229*l.* odd.

LANDLORD AND TENANT.—At the Oxford Circuit it has been ruled that a written agreement to let and to build may be verbally rescinded by mutual agreement. The jury assessed the damages contingent at 20*l.*, so as to prevent the necessity of another trial, should the Court above differ from this decision.

* For a development of the project see the *Ecclesiologist* for August.

SCENERY AT ROYAL ITALIAN OPERA HOUSE, COVENT GARDEN.—Halévy's very interesting opera, *La Juive*, has afforded to Messrs. Grieve and Telbin an occasion to produce some beautiful scenery, and to Mr. F. Gye, the able director, an opportunity for the display of taste and knowledge in the costumes and arrangements. The action is laid in Constance, in the fifteenth century, and the whole is contrived to give a vivid impression of the times. The first scene is a good piece of domestic Gothic: the turret on the left, with small gablets round the roof, and the well, are capitally drawn. A wood scene in the third act, with tent, or horizontal canopy, on the left hand side, with the picturesque groups brought before it, is exceedingly effective.

PLANS OF SLAUGHTERHOUSES.—Out of thirteen sets of plans for public and private slaughterhouses, offered for competition, containing excellences of a varied character, the directors of the Islington Cattle Market and Abattoir Company have decided upon awarding their premiums for a public slaughterhouse to Messrs. Ellis and Hussey, and for a private one, to Mr. T. Turner, of Bucklersbury. We do not exactly understand this decision, having previously been made to understand that an ingenious plan by Mr. Gooch was selected.

NEW CHURCHES.—At Lambeth two new churches are about to be erected, one to be named St. Thomas's, and the other St. Andrew's.——The first stone of a new church was laid at Gravesend on the 24th ult. Of the cost, about 2,000*l.* have been subscribed, and Lord Darnley gave the site, besides a donation of 200*l.* A large sum is still required.——The first stone of a new church was laid last week in Victoria-road, Kensington. The site was liberally presented by H. L. Vallotton, Esq., the proprietor of the adjoining estate.

BLACKFRIARS BRIDGE.—The fifth arch from the north side of this bridge appears to have sunk to some extent, and means are being taken to secure it from further danger.

THE BUILDING IN HYDE PARK.—The contractors have begun, and are proceeding vigorously.

LORD WARD'S PICTURES.—About 120 pictures, collected in Italy and elsewhere by Lord Ward, have been placed in the great room of the Egyptian Hall. We believe it is Lord Ward's intention to make them accessible to the public.

THE NEW HOUSE OF COMMONS.—With the view of improving the acoustical properties of the chamber, a temporary ceiling has been formed, which considerably reduces the height of the apartment. It is in its central compartment horizontal, with sides and ends inclining downward; the former being 8 feet below the level of the previous ceiling, and the latter 13 feet 6 inches. We are told that the hearing is certainly improved: at the same time, the quantity of light admitted has been materially diminished, the upper half of all the windows being contained in the space between the new ceiling and the old. We must look into the matter.

EXETER-HALL.—Considerable alterations are about being effected in this building, with a view to remedy defects complained of in its capabilities for sound. The raising of the present flat ceiling, giving it an arched form, free from unnecessary projections, the removal of the large square pillars at the gallery end of the hall, and throwing back the organ and wall behind it, are among the principal improvements which have been sanctioned by the directors and shareholders.

FILTER FOR SEA-WATER.—M. Cardan described at the Academy of Sciences a new system of filtering intended to make sea-water drinkable. The apparatus consists of a syphon, the long tube of which is filled with powdered charcoal.

INSTITUTION OF MECHANICAL ENGINEERS.—A general meeting of the members was held on Wednesday in last week at Birmingham, Mr. M'Connell in the chair, when papers were read—by Mr. W. Smith, on condensation of steam in Staffordshire engines, and improvements in them; by Mr. Archd. Slate, on a blowing engine working at high velocities; by Mr. J. A. Shipton, Manchester, on a new reciprocating engine; and by Mr. T. Thorneycroft, on the form of shafts and axles.

TENDERS

Received July 8th, for the erection of a new corn exchange, assembly rooms, and markets, at Worksop; Mr. J. C. Gilbert, Nottingham, architect:—

Whitaker, Rotherham	£3,579 10 0
Levick, Worksop	3,090 0 0
Thompson, Derby	2,995 0 0
Gregg and Co., Worksop	2,894 0 0
Kesteven, Rotherham	2,820 0 0
Battersby and Roberts, Worksop	2,817 15 2
Carlisle, Beighton	2,600 0 0
Ferguson, Nottingham (accepted)	2,495 10 0

Received July 30th, for the erection of All Saints parsonage house, Derby; Mr. H. J. Stevens, architect:—

Rickards, Derby	£1,690 0 0
Swain, ditto	1,490 0 0
Bridgart, ditto	1,350 0 0
Thompson, ditto (accepted)	1,245 0 0

For the erection of the Holloway Ragged Schools, in the Hornsey-road; Mr. James Harrison, architect. Quantities taken out by Mr. Gritten:—

Woods	£1,499 0 0
Harding	1,457 0 0
Pilbeam	1,130 0 0
Carter and Ellis	1,125 0 0
Smith	1,093 0 0
William Hill	1,082 0 0
Trego	1,074 0 0
W. M. Hill and Son	1,025 0 0

For the erection of a house at Iver, Bucks, for Mr. J. A. Edwards; Mr. Tyerman, architect. Quantities supplied:—

Shopee, Uxbridge	£1,645 0 0
Snowball, Slough	1,482 0 0
Hardy, Cowley	1,556 0 0
Kingbury, Uxbridge	1,270 0 0
Moreton, ditto (accepted)	1,168 0 0

TO CORRESPONDENTS.

"W. C." (politics are not our province. We regret that an acknowledgment of a long communication from W. C., made some time since, was not sent, by accident, though written), "One of the Rejected Designers," "A Competitor," "An Injured Competitor," "J. B.," Bolton (recipe was given in a previous number), "W. P.," "J. J. L.," "D. O. E.," "F. G.," "H. W., jun.," "A. B.," "J. G.," Oxford (thanks), "One of the Unfortunate," "J. F.," "J. M." (prospectus was not inclosed), "S. E.," "Working Man," "A. C. S." (will find a letter elsewhere), "J. H.," "M. P.," "G. S.," "J. J. C." (next week), "J. G. H." (we have nothing to suggest, but shall be happy to see the results of trip), "G. M.," "Walter" (next week), "R. J. J." (Adam Black, Edinburgh, or Longmans, Brown, Green, and Co., London: published in 1830). "The Architecture of Country Houses," by A. J. Downing, New York: Appleton and Co. 1850.

"*Books and Addresses.*"—We have not time to point out books or find addresses.

NOTICE.—All communications respecting *advertisements* should be addressed to the "Publisher," and not to the "Editor:" all other communications should be addressed to the EDITOR, and *not* to the Publisher.

ADVERTISEMENTS.

AUTOBIOGRAPHY of JOHN BRITTON, F.S.A.—Subscribers to the BRITTON TESTIMONIAL are informed that the greater portion of the above Work will be ready for delivery, at No. 17, BURTON STREET, on and after the 10th day of August next. Of this Work the following numbers are printed:—

Imperial 4to. with proofs, 2 vols. half bound, morocco; only 25 copies, for subscribers of 10*l.* 10*s.* Demy 4to. 2 vols. half bound; 125 copies for subscribers of 3*l.* 3*s.* and 5*l.* 5*s.* (These two sizes class with the Author's "Architectural" and "Cathedral Antiquities," and contain six prints more than in the octavo copies.) Royal 8vo. 500 copies, for subscribers of 1*l.* 1*s.* and 2*l.* 2*s.*; with variations in the illustrations, &c. for each class respectively.

Subscriptions unpaid will be received by DIXON and CO., bankers, 25, Chancery-lane.

July 25, 1850.

On 1st of August, price 2*s.* No. LXXIX. (XLIII., New Series),

THE ECCLESIOLOGIST. Published under the Superintendence of the Ecclesiological late Cambridge Camden Society.

CONTENTS:—Ecclesiology in Guernsey—Addenda to the List of Printed Service Books—Mr. Chamberlain on the Structure and Arrangement of Chancels—Colonial Church Architecture—Tasmania—Mr. Lowe's Theory of Lychnoscopes—Notre Dame de Paris—The Cantus Collectarum—S. Barnabas, Pimlico, &c.—Biers and Hearses—A Plea for a Burial Guild, and Practical Improvement in Funerals—Reports, Reviews, New Churches, &c.

London: J. MASTERS, Aldersgate-street, and New Bond-street.

THE ART-JOURNAL FOR AUGUST, No. 146, contains TWO HIGHLY-FINISHED ENGRAVINGS on STEEL from Pictures in the VERNON GALLERY—"A Greek Girl," after C. L. Eastlake, R.A., and "The Lake of Como," after C. Stanfield, R.A.; also an engraving on Steel, from the bas-relief of "Grief," by J. H. Foley, A.R.A. Among the literary contents will be found—"The Chemistry of Pottery Clay," by Robert Hunt; "Electrotyping applied to Art-Manufactures," by Dr. E. Braun; "The Royal Cradle," with numerous illustrations; "The Exhibition of 1851, its Errors and Dangers;" "Manufacturers *versus* Dealers in the Exhibition of 1851;" "Photography on Paper and on Glass," by T. A. Malone; "The Vernon Gallery at Marlborough House," &c., &c.

G. VIRTUE, 25, Paternoster-row.

THE GENTLEMAN'S MAGAZINE for AUGUST, price 2*s.* 6*d.* contains—Who wrote Shakspere's Henry VIII.?—Contemporary account of the Funeral of Amy Robsart—A Record of Rambouillet—Michael Drayton and Lodge, by J. Payne Collier, Esq., V.P.S.A.—Memoir of Paul Louis Courier, by F. Harwell, Esq.—Great Literary Piracy in the Prayer-Book published by the Ecclesiastical History Society—The True Principles of Church Restoration—Memoirs of Mr. Plumer Ward—The Chronicle of Queen Jane—The Duke of Cambridge at Hanover: a Letter of Elizabeth Dowager Landgravine of Hesse Homburg to her brother King George the Fourth—History of Pottery, by Joseph Marryat (with Three Plates)—The College Plate at Oxford (with Two Plates)—A full report of the Meeting of the Archæological Institute at Oxford—With Notes and Correspondence of the Month, Review of New Publications, Historical Chronicle, and Obituary, including Memoirs of the Duke of Cambridge, Sir Robert Peel, Miss Jane Porter, W. C. Townsend, Esq., Rev. William Kirby, F.R.S.; &c. &c.

NICHOLS and SON, 25, Parliament-street.

FOR 1850.

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See Priced List Advertisement, Saturday, June 15.

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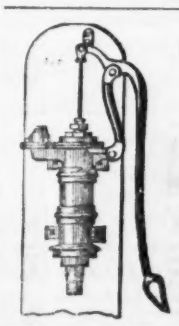

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13	1 9 3	1 7 0	50	4 1 9	3 13 3
16	1 11 3	1 8 10	53	4 11 6	4 3 6
20	1 14 4	1 11 6	56	5 4 0	4 14 0
23	1 17 0	1 13 8	60	6 6 0	5 12 6
26	2 0 3	1 16 2	63	7 4 0	6 9 6
*30	2 5 0	1 19 9	66	8 4 0	7 10 8
33	2 8 6	2 2 10	70	10 0 4	9 7 6
36	2 13 0	2 6 4	73	11 16 2	11 3 6
40	2 19 9	2 12 0	76		13 1 9
43	3 5 3	2 17 2	80		15 12 10

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Elliptic Stoves, double backs, 2½d. per inch.
Register Stoves, 5d. 6d. 6½d. 7½d. per inch.
Self-acting Ranges, with circular ovens and back boilers, best wrought bars and bright fittings—
3 ft., 3l. 18s. 3 ft. 6 in., 3l. 7s. 4 ft., 3l. 15s.
3-feet Cottage Ranges, with ovens and back boilers, 33s. each.
3-feet self-acting ditto, ditto ..... 35s. each.
Air Bricks, 3s. 6d. per doz.—1-inch Cut Lath Nails, 13s. 6d. per cwt.

Best Patent Cut Clasp.				
1½	1½	2	2½	3 inch and larger,
14s. 6d.	14s.	13s.	12s. 6d.	12s. per cwt.

Best Sheet Floor Brads, 11s. 6d. per cwt.
Best Town Glue, 38s. Ditto, Scotch, 52s. per cwt.

Best Patent Sash Line.					
1	2	3	4	5	6
4s.	4s. 6d.	5s. 6d.	7s.	8s.	10s. 6d. per gross.

At F. R. WILLIAMSON'S IRONMONGERY and STOVE WAREHOUSE, 35, Chiswell-street, Finsbury-square.
Lists of Prices had on application at the Warehouse, or by letter pre-paid, inclosing postage stamp.—Warehouse closes at 7 o'clock.

CLARK and HUNT'S IRONMONGERY, STOVE and METAL WAREHOUSE, 159, Shoreditch.
Strong Elliptic Stoves, with extra back, 2½d. per inch.
Register Stoves, 5d. per inch.
3-ft. Self-acting Cottage Ranges, with Oven and Boilers, 36s. each.
3-ft. Self-acting ditto, with wrought bars and bright fittings, 58s. ea.
Cast Rain-water Pipe { 2 in. 2½ in. 3 inch. / 8d. 10d. 1s. per yard.
Cast Gutters—4 inch, 8d. per yard.
O.G. Gutters ..... { 4 in. 4½ inch. / 11d. 1s. per yard.
Best Cut Clasp and Rose { 1½ 1½ 2 2½ 3 inch. / 13s. 14s. 6d. 14s. 13s. 12s. 6d. per cwt.
Sheet Floor Brads, 11s. 9d. per cwt.
1-inch Cut Lath, 14s. per cwt. Cast Lath, 9s. 6d.
6-inch 2-Bolt Rim Locks, with Scotch Springs and best Furniture Patent Spindles, 15s. per doz.
6-inch 3-Bolt Rd. Ward Mortice, with best Furniture and Patent Spindles, 9s. 9d.
Light Elliptic and Register Metal, 12s. per cwt.
Hot Water Pipes, 8s. 6d. per cwt.

TO BUILDERS, CABINET-MAKERS, and OTHERS.
Best Cut Sheet Flooring Brads, 12s. per cwt.
Fine Cut Clasp and Rose.

15s.	14s. 6d.	14s.	13s.	13s. per cwt.
1½	2	2½	3 inch.	

Cross Garnet Hinges, per dozen pair.

2s. 9d.	3s. 3d.	4s. 3d.	5s.	6s.	8s.	
10	12	14	16	18	20 in.	

Best Bright Tower Bolts, per doz.

1s. 3d.	1s. 7d.	2s.	2s. 6d.	2s. 10d.	3s. 3d.	3s. 7d.
3	4	5	6	7	8	9 in.

Iron Rain-water Pipe.

9½d.	10½d.	1s. 1d.	1s. 5d.	1s. 8d. per yard.
2	2½	3	3½	4 inch.

Best London Glue, 28s. per cwt.
Cast Lath Nails, 10s. per cwt.
Air Bricks, 3s. 6d. per doz.
Hooping for bond, 8l. 10s. per ton.
Sash Weights, 5s. per cwt.
TERMS—NET CASH.
A price-list may be had on application.
A. L. PFEIL and Co.,
Wholesale Ironmongers, Brass Foundry and Nail Warehouse,
5 and 6, Broad-street, Bloomsbury, London.
AGENTS FOR LEA'S PATENT MORTISE LOCKS AND BOLTS.

TO BUILDERS AND CARPENTERS, &c.
J. H. BOOBBYER and CO., late Sturch and Boobbyer, Ironmongery, Brass Foundry, Nail, and Tool Warehouse, No. 14, Stanhope-street, Clare-market, London, for the supply of Carpenters, Builders, Cabinet-makers, Upholders, &c., at wholesale prices.
Best Cut Sheet Flooring Brads, 12s. per cwt.
Fine Cut Clasp and Rose.

15s.	14s. 6d.	14s.	13s.	13s. per cwt.
1½	1½	2	2½	3 inch,

Best Bright Tower Bolts.

1s. 3d.	1s. 7d.	2s. 2d.	2s. 6d.	per dozen.
3	4	5	6 inch.	

Best Patent Sash Line.

4s.	4s. 6d.	5s. 6d.	7s.	8s.	10s. 6d. per gross.
No. 1	2	3	4	5	6

Cast Lath Nails, 10s. per cwt. Sash Weights 5s. per cwt.
Air Bricks, 3s. 6d. per dozen.
DR. ARNOTT'S VENTILATORS.
11 by 8 inches ..... 5s. each.
16 by 9 " ..... 8s. "
An assortment in Brass, Bronzed, Gilt, &c.
An extensive stock of Mortise Locks, Drawback Locks, Iron Rim Locks, and Latches, of every description, at very reduced prices; also Door Furniture, in china, amber, crystal, ivory, ebony, buffalo, horn, brass, &c., with Finger-plates, Bell-pulls and Levers *en suite*.
B. and Co. are the inventors of SHIFTING BOLT MORTISE LOCKS, &c., so universally approved of.—Established nearly 200 years, for the supply of goods from the best manufactories at the lowest prices.

STOVE GRATES.—The Best and Cheapest Grate for all Useful purposes, is PIERCE'S UNIVERSAL FIRE-LUMP GRATE, made of the finest prepared Fire Loam in one entire piece; very strong, with large Hobs, Improved Iron Bars, Bott m, and Trivet complete; will burn either Wood, Coal, Coke, or Peat. Price 11s. 6d. and 13s. 6d.
Also, his IMPROVED REGISTERED COTTAGERS' GRATES, on the same principle, but adapted for warming two rooms, with one small fire. This grate is constructed so as not to require any fixing or brickwork, and was exhibited at the agricultural shows of the present year, when it was highly commended. Prices—22s. 6d.; 25s.; 27s.; and 30s.—May be seen at PIERCE'S PYRO-PNEUMATIC STOVE-GRATE MANUFACTORY, 5, JERMYN-STREET, REGENT-STREET.
"A Cottagers' Grate, on one of the best principles we ever saw, shown by W. Pierce, was both cheap and compact."—*Exeter Western Times*, July 20, 1850.
*** Old Stoves modernised, and altered to the above principle

PATENT GALVANIZED IRON Plain or Corrugated for ROOFS, HOUSES, &c. Wholesale Retail, and for Export.
Apply to TUPPER and CARR,
3, MANSION-HOUSE PLACE, LONDON;
or BROAD-STREET, BIRMINGHAM,
Patent Galvanized Iron Guttering,
Water or Gas-pipes, Hooping, Wire, &c.
*** An allowance to the trade.

IRON BUILDING and ROOFING WORKS,
BIRMINGHAM, late of Southwark.
JOHN H. PORTER,
Manufacturer of the Corrugated and other kinds of Iron Roofing for railway stations, carriage sheds, farm buildings, gas-works, warehouses, factories, &c. &c.
PATENTEE
Of the Corrugated Iron Beams, Girders, and Fire-proof Floors.

TO GAS AND WATER COMPANIES, ENGINEERS, AND CONTRACTORS.
ANDREW M'LAREN & Co., Ironfounders, STEEL YARD WHARF, UPPER THAMES-STREET, have always on hand a large STOCK of SOCKET PIPES of all sizes, with the usual connections. Retorts, columns, girders, and all description of castings contracted for.
Their stock of goods for GENERAL IRONMONGERS is unequalled for variety and lowness of price: comprising, range, register, and elliptic metal and stoves, rain-water pipes, O. G., and half-round guttering, sash-weights, railing bars, panels, bakers' oven work, sink traps, air bricks, water-closet metal, &c. &c.
Printed list of prices, and books of drawings for the use of ironmongers, forwarded on application.

IRON FOUNDRY, 80, Goswell-street (late of Brick-lane, St. Luke's).—J. J. JONES having made great additions to his STOCK of PATTERNS, begs to inform the Trade, that he can now supply them with Plain and Ornamental Iron Columns, Girders, Railings, Gates, Iron Coping, Balconies, Window Guards, Verandahs, Ornamental Staircase Panels, Iron Staircases, Tomb Enclosures, Trellis Panelling, Lamp and other Brackets, Cantilevers, Newel Bars, Water Closet Work, Area Gratings, Fly and other Wheels, Wheel Plates, &c.
BAKER'S OVEN WORK, Forge Backs and Troughs, Rain Water Pipes and Gutters, Sash Weights, Furnace Bars, Stoves, Ranges, &c., always in stock.

FOUNDRY AND IRONWORKS,
18, DRURY-LANE, and CHARLES-STREET, DRURY-LANE,
GLOVER, BROS.,
Solicit the attention of the Trade to their extensive Stock of PATTERNS for CASTINGS of EVERY DESCRIPTION, either structural or ornamental.
Patterns of Girders, Columns, Balconies, Railing, Ornamental Carriage and Park Gates, Lamp and Street Posts, Tanks, Pipes, Wheels, Pinions, Lathes, and Steam-engines; Range and Hot-plate Metal. An improved Soot Door adapted for internal work.
A large stock of Rain-water Pipes, Plain and O G Gutters, Air-bricks, Sash Weights, Air-tight Sewer Grates, Stable Fittings, Hurdles, &c.
Plain and Ornamental Vases 20 per cent. cheaper than Terra-cotta.
Estimates given for Iron Buildings, Wrought-iron Roofing, Greenhouses, Staircases, Wrought-iron Girders, Fireproof Doors, Book Safes and Strong Rooms, Tanks and Boilers and every description of ironwork to specification, and the work executed with every attention to quality and despatch.
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CHUBBS' LOCKS, FIRE-PROOF SAFES, AND CASH BOXES.
CHUBBS' PATENT DETECTOR
LOCKS give perfect security from false keys and picklocks, and also detect any attempt to open them. They are made of all sizes, and for every purpose to which locks are applied, and are strong, secure, simple, and durable.
CHUBBS' PATENT LATCH, for front doors, counting-house doors, &c., is simple in construction, low in price, and quite secure. The keys are particularly neat and portable.
CHUBBS' PATENT FIRE-PROOF SAFES, BOOKCASES, CHESTS, &c., made entirely of strong wrought-iron, so as effectually to resist the falling of brick-work, timber, &c., in case of fire, and are also perfectly secure from the attacks of the most skilful burglars.
CHUBBS' CASH and DEED BOXES, fitted with the Detector Locks.
CHUBB and SON, 57, St. Paul's Churchyard, London.

LEADBEATER, FIREPROOF SAFE and DETECTOR LOCK MANUFACTURER to HER MAJESTY'S BOARD of ORDNANCE.
LEADBEATER, many years Manufacturer for Chubb.
LEADBEATER'S strong wrought-iron FIREPROOF BOOK SAFES, CHESTS, DOORS for STRONG ROOMS, PLATE CLOSETS, PARTY WALLS, &c., all of the best make, secured by LEADBEATER'S IMPROVED DETECTOR LOCKS, and possessing all the most recent improvements, afford PERFECT SECURITY against Fire and Thieves. Extra Strong Cash and Deed Boxes, &c., sold at prices which place them within the reach of all classes.
LEADBEATER'S IMPROVED DOUBLE-ACTION COMBINATION LATCHES, for securing street and office doors, cannot be opened by false keys or picklocks.
A large assortment on hand of all sizes and fitted for every purpose at LEADBEATER'S FIREPROOF SAFE and DETECTOR LOCK MANUFACTORY, 125, ALDERSGATE-STREET, CITY, LONDON.—Estimates sent by return of post.
A vacancy for an apprentice—a small premium required.

TO BUILDERS AND OTHERS.
HART and SONS, Wholesale and Manu- facturing Ironmongers, Nos. 53, 54, and 55, Wych-street, Strand. Established 1819. Proprietors and sole Manufacturers of PITT'S PATENT SELF-ADJUSTING DOOR FURNITURE and SPINDLES, and Manufacturers of Dr. ARNOTT'S VENTILATING CHIMNEY VALVES.
HART and SONS solicit the attention of Builders, House Decorators, Smiths, Bell-hangers, &c. &c. to their extensive and well selected stock of DOOR FURNITURE in every suitable material, *en suite* with finger-plates, bell-pulls, levers, &c., and also to their LOCKS and LATCHES in mortice, rim, drawback, iron gate, cabinet &c., of all qualities, including Barron's, Bramah's, Chubb's, and Pitt's Patent.—Their GENERAL IRONMONGERY, wrought and cut nails, screws, hinges, bolts, &c. &c.
BRASS FOUNDRY—Bell cranks of all descriptions, cornice poles, picture rods, skew door handles, desk and hat rails, window guards, Espagniolette bolts, &c. &c.
WINDOW FITTINGS of all kinds, including brackets, rods, arms, sliding sockets, trays, &c. &c.
DOOR SPRINGS and HINGES, including Redmund's, Smith's, Collinge's, Gerish's, and Cotterell's patents.
WINDOW BLIND FITTINGS of the most approved principle.
LEA'S RACK BOLT MORTICE LOCKS, for which they are AGENTS, as well as for all inventions of merit as soon as perfected.
HART and SONS, aware that the practice of publishing NET price-lists is injurious to the interests of the trade generally, are unwilling to follow it, but at the same time they beg to assure their friends that their prices shall be equally as low as those of any other respectable house.

TO ARCHITECTS.—COMPETITION AND OTHER DRAWINGS.
MR. THOMAS S. BOYS, Member of the New Society of Painters in Water Colours, and author of "The Picturesque Architecture of Paris, Ghent, Rouen, &c." and of "London as it is," offers his services in Tinting Backgrounds, Landscapes, Perspective Views, Interiors, &c. From the long experience he has had in such subject s, he is fully aware of the points essentially necessary to be attended to. Drawings and designs lithographed in a superior manner.—Address, Mr. BOYS, 81, Great Titchfield-street, Oxford-street.

WOOD CARVING.—J. BARNETT begs to inform Architects, Builders, Cabinetmakers, &c. that he executes Wood Carving of all kinds with promptitude and economy; and especially with a very careful adherence to the given style, whatever it may be.—14, Woburn-buildings, Tavistock-square.

LEAD, WATER-CLOSETS, &c.— Plumbers and builders supplied with Patent Pipe, Cast and Milled Lead, in sheets or cut to dimensions; also Pumps, Water-closets, and every description of brasswork used by plumbers, at WILLIAM DENT'S Manufactory, 21, Newcastle-street, Strand.

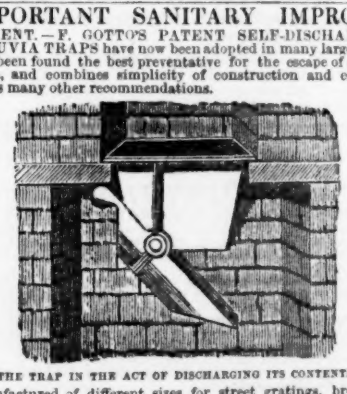
GLAZED STONE WARE DRAIN PIPES.—TURNER and MOUNTAGUE, Leigh, near Southend, Essex, manufacturers of stone ware drain pipes and drain tiles. Drain pipes and tiles to any pattern.—Orders received at, and executed from Harrow-bridge Wharf, Stratford, Essex; Falcon Wharf, 30, Bankside, Blackfriars; and at their Cement Works, Orchard House, Blackwall.

LAMBERT'S PATENT HIGH-PRES- SURE and SELF-ACTING VALVE COCKS are warranted not to leak under the heaviest pressure, and to be exceedingly durable; they have been continuously in use during the last four years, without needing even repair. The ball valves run a full bore on the least descent of the ball; the friction is so exceedingly slight that it is quite impossible that they can ever become fixed or set fast. They are also much cheaper than any ball-tap now in use.—Manufactured solely by THOMAS LAMBERT and SON, Patentees, Short-street, New Cut, Lambeth.

IMPORTANT SANITARY IMPROVEMENT.—The cheapest and most effectual preventive of Stench and Noxious Vapours arising from Sewers, Drains, Cesspools, &c., is
BUNNETT'S PATENT SELF-ACTING AND SELF-CLEANSING EFFLUVIA TRAPS.
Thousands have now been used in all parts of the kingdom with uniform success. See testimonials, &c., which may be had at the Office, 26, Lombard-street.
Perfect action and durability are guaranteed.
BUNNETT AND CO., ENGINEERS AND PATENTEES OF REVOLVING IRON AND WOOD SHUTTERS, METAL SASHES, DOUBLY TRAPPED SELF-ACTING WATER-CLOSETS, &c. &c.
Office, 26, Lombard-street; Works, Deptford, Kent.

TO PLUMBERS, BUILDERS, AND ENGINEERS.
CHEAPEST HOUSE IN LONDON for every description of best Town-made Brass and Copper Work.
PAN CLOSETS complete, with WHITE BASIN, 27s.—2 inch Lift Pumps, 63s.; 2½ in., 75s.; 3 in. 87s. 6d. Cocks: ½ in., 1s. 8d.; 5-8th in., 2s.; ¾ in., 2s. 6d.—Copper Pipes, per foot: 1 in., 10d.; 1¼ in., 1s.; 1½ in., 1s. 2d.; 2 in., 1s. 6d.
Gun Metal Steam Cocks, Safety Valves, Steam and Water Indicators, &c., equally low at A. McGLASHAN'S, 16, Long-acre, and Hart-street, Covent Garden.

IMPORTANT SANITARY IMPROVE- MENT.—F. GOTTO'S PATENT SELF-DISCHARGING EFFLUVIA TRAPS have now been adopted in many large towns. It has been found the best preventative for the escape of noxious effluvia, and combines simplicity of construction and economy with its many other recommendations.



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Manufactured of different sizes for street gratings, breweries, slaughter-houses, and private dwellings, from 32s. to 5s. 6d. each.
Manufactured solely by Mr. JOHN ISMAY, Dover.
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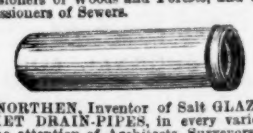
Mr. FREDERICK GOTTO will attend to all communications addressed to him at Dover.

UNION BROWN STONE POTTERY, CHEMICAL APPARATUS, and DRAIN-PIPE MANUFACTORY, 14, Vauxhall-walk, Lambeth. Patronised by Her Majesty's Commissioners of Woods and Forests, and by the Metropolitan Commissioners of Sewers.

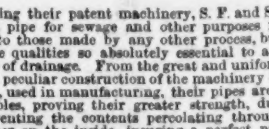


WILLIAM NORTHEN, Inventor of Salt GLAZED BROWN STONE SOCKET DRAIN-PIPES, in every variety of shape, begs to call the attention of Architects, Surveyors, Contractors, and Others to the following list of prices:—

Straight Barrel Pipes, with Socket Joints, in 2-ft. Length					
2-in.	3-in.	4-in.	6-in.	9-in.	12-in. bore.
4d.	5d.	6d.	8d.	1s. 1½d.	1s. 10d. per foot.

Bends and Junctions equally low.
N.B. Drain-pipes of my Manufacture may also be obtained of Messrs. ROSHER, at their Lime Wharfs, Albion Wharf, Holland-street, Blackfriars; Millbank-street, Westminster; Kingsland Basin, Kingsland-road; and Limekiln, Limehouse; and of Messrs. MARTIN and WOOD, Market Wharf, Regent's Park Basin.

IMPROVED DRAINAGE
BY ROYAL LETTERS PATENT.



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By employing their patent machinery, S. F. and S. are enabled to produce a pipe for sewage and other purposes in every way far superior to those made by any other process, but more especially in those qualities so absolutely essential to a perfect, and cleanly mode of drainage. From the great and uniform amount of pressure, and peculiar construction of the machinery (allowing the air to escape), used in manufacturing, their pipes are entirely free from air-bubbles, proving their greater strength, durability, and entirely preventing the contents percolating through; they are much smoother on the inside, insuring a perfect passage for the sewage, and preventing any deposit.
STRAIGHT TUBES WITH SOCKET JOINTS, BENDS, JUNCTIONS, TRAPS, CLOSET PANS, Water, Gas, and Chemical Pipes, Architectural Ornaments, Vases, Chimney Pots, &c. Shipping and foreign orders executed to any extent.
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